Canon

EOS
REBEL T3i
EOS 600D

The "Software Start Guide" and "Quick Reference Guide" are provided at end of this manual.

E

INSTRUCTION MANUAL

Advanced Shooting

This chapter builds on Chapter 3 and introduces more ways to shoot creatively.

- The first half of this chapter explains how to use the <Tv>, <Av>, <M>, and <A-DEP> modes on the Mode Dial.
- All the functions explained in Chapter 3 can also be used in the <Tv>, <Av>, and <M> modes.
- To see which functions can be used in each shooting mode, see page 268.
- The ☆ mark shown on the right of the page title indicates that the function is available only in Creative Zone modes (p.22).
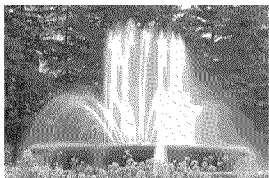
⌒↖ About the Main Dial Pointer

The pointer icon <⌒↖> displayed together with the shutter speed, aperture setting, or exposure compensation amount indicates that you can turn the <⌒> dial to adjust the respective setting.
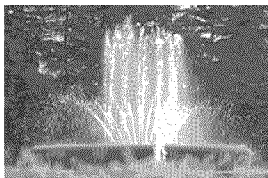
Tv: Action Shots

You can either freeze the action or create motion blur with the < Tv > (Shutter-priority AE) mode on the Mode Dial.

* < Tv > stands for Time value.

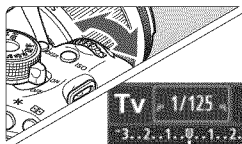Blurred motion
(Slow shutter speed: 1/30 sec.)

Frozen action
(Fast shutter speed: 1/2000 sec.)

Set the Mode Dial to < Tv >.

Set the desired shutter speed.

● See "Shooting Tips" for advice on setting the shutter speed.
● Turning the < ⌒ > dial to the right sets a faster shutter speed, and turning it to the left sets a slower one.

Take the picture.

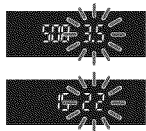● When you focus and press the shutter button completely, the picture will be taken at the selected shutter speed.

Shutter Speed Display

The LCD monitor displays the shutter speed as a fraction. However, the viewfinder displays only the denominator. Also, "**0"5**" indicates 0.5 sec. and "**15"**" is 15 sec.

⚡ Shooting Tips

● **To freeze the action or moving subject.**
Use a fast shutter speed such as 1/4000 sec. to 1/500 sec.

● **To blur a running child or animal giving the impression of fast movement.**
Use a medium shutter speed such as 1/250 sec. to 1/30 sec. Follow the moving subject through the viewfinder and press the shutter button to take the picture. If you use a telephoto lens, hold it steady to prevent camera shake.

● **How to blur a flowing river or water fountain.**
Use a slow shutter speed of 1/30 sec. or slower. Use a tripod to prevent hand-held camera shake.

● **Set the aperture so that the shutter speed display does not blink.**
If you press the shutter button halfway and change the shutter speed while the aperture is displayed, the aperture display will also change to maintain the same exposure (amount of light reaching the image sensor). If you exceed the adjustable aperture range, the aperture display will blink to indicate that the standard exposure cannot be obtained.
If the exposure will be too dark, the maximum aperture (smallest number) will blink. If this happens, turn the <✎> dial to the left to set a slower shutter speed or increase the ISO speed.
If the exposure will be too bright, the minimum aperture (highest number) will blink. If this happens, turn the <✎> dial to the right to set a faster shutter speed or decrease the ISO speed.

⚡ Using the Built-in Flash

To obtain a correct flash exposure, the flash output will be set automatically (autoflash exposure) to match the automatically-set aperture. The flash sync speed can be set from 1/200 sec. to 30 sec.
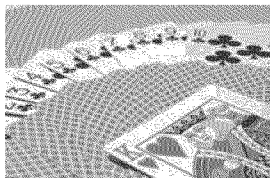
95

Av: Changing the Depth of Field

To blur the background or to make everything near and far look sharp, set the Mode Dial to < **Av** > (Aperture-priority AE) to adjust the depth of field (range of acceptable focus).
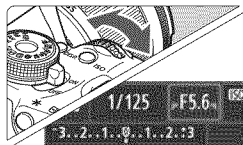* < **Av** > stands for Aperture value which is the size of the diaphragm hole inside the lens.
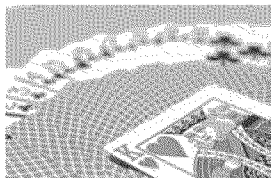
Blurred background
(With a low aperture f/number: f/5.6)

Sharp foreground and background
(With a high aperture f/number: f/32)

Set the Mode Dial to < Av >.

Set the desired aperture.

- The higher the f/number, the wider the depth of field where sharper focus is obtained in both the foreground and background.
- Turning the < ⌀ > dial to the right will set a higher f/number (smaller aperture opening), and turning it to the left will set a lower f/number (larger aperture opening).

Take the picture.

- Focus and press the shutter button completely. The picture will be taken with the selected aperture.

Aperture Display
The higher the f/number, the smaller the aperture opening will be. The apertures displayed will differ depending on the lens. If no lens is attached to the camera, "**00**" will be displayed for the aperture.

96

⁝⚞ Shooting Tips

⊛ **When using an aperture with a high f/number, note that camera shake can occur in low light scenes.**
A higher aperture f/number will make the shutter speed slower. Under low light, the shutter speed can be as long as 30 sec. In such cases, increase the ISO speed and hold the camera steady or use a tripod.

⊛ **The depth of field depends not only on the aperture, but also on the lens and on the subject distance.**
Since wide-angle lenses have a wide depth of field (range of acceptable focus in front of and behind the point of focus), you need not set a high aperture f/number to obtain a sharp picture from the foreground to the background. On the other hand, a telephoto lens has a narrow depth of field.
And the closer the subject, the narrower the depth of field. A farther subject will have a wider depth of field.

⊛ **Set the aperture so that the shutter speed display does not blink.**
If you press the shutter button halfway and change the aperture while the shutter speed is displayed, the shutter speed display will also change to maintain the same exposure (amount of light reaching the image sensor). If you exceed the adjustable shutter speed range, the shutter speed display will blink to indicate that the standard exposure cannot be obtained.
If the picture will be too dark, the "**30"**" (30 sec.) shutter speed display will blink. If this happens, turn the <✎> dial to the left to set a lower aperture f/number or increase the ISO speed.
If the picture will be too bright, the "**4000**" (1/4000 sec.) shutter speed display will blink. If this happens, turn the <✎> dial to the right to set a higher aperture f/number or decrease the ISO speed.

97

🔦 Using the Built-in Flash

To obtain a correct flash exposure, the flash output will be set automatically to match the set aperture (autoflash exposure). The shutter speed will be set automatically between 1/200 sec. - 30 sec. to suit the scene's brightness.

In low light, the main subject is exposed with the automatic flash, and the background is exposed with a slow shutter speed set automatically. Both the subject and background look properly exposed (automatic slow-speed flash sync). If you are handholding the camera, keep it steady to prevent camera shake. Using a tripod is recommended.

If you do not want a slow shutter speed to be used, set **[3: Flash sync. speed in Av mode]** to **[1: 1/200-1/60 sec. auto]** or **[2: 1/200 sec. (fixed)]** in **[🔧 Custom Functions (C.Fn)]** (p.252).

Depth of Field Preview ☆

The aperture opening (diaphragm) changes only at the moment when the picture is taken. Otherwise, the aperture remains fully open. Therefore, when you look at the scene through the viewfinder or LCD monitor, the depth of field will look narrow.
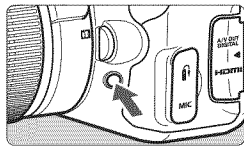
When you press the depth-of-field preview button, you can see the actual depth of field before you shoot.

📷 While looking at the Live View image (p.124) and holding down the depth-of-field preview button, you can change the aperture and see how the depth of field changes.
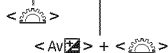
98

M: Manual Exposure

You can set both the shutter speed and aperture manually as desired. While referring to the exposure level indicator in the viewfinder, you can set the exposure as desired. This method is called manual exposure.
* <M> stands for Manual.

< >

< Av > + < >

Standard exposure index

Exposure level mark

1 Set the Mode Dial to <M>.

2 Set the shutter speed and aperture.

- To set the shutter speed, turn the < > dial.
- To set the aperture, hold down the < Av > button and turn the < > dial.

3 Focus the subject.

- Press the shutter button halfway.
- ▶ The exposure setting will be displayed in the viewfinder.
- The exposure level mark < ▮ > indicates how far the current exposure level is from the standard exposure level.

4 Set the exposure and take the picture.

- Set the shutter speed and aperture as desired.
- If the exposure set exceeds ±2 stops from the standard exposure, the end of the exposure level indicator will display < ◀ > or < ▶ > in the viewfinder. (On the LCD monitor, if the exposure level exceeds ±3 stops, the < ▮ > icon will blink at where <-3> or <+3> is displayed.)

If [Q: Auto Lighting Optimizer] (p.109) is set to any setting other than [Disable], the image may still look bright even if a darker exposure has been set.

5 Using the Built-in Flash

To obtain a correct flash exposure, the flash output will be set automatically (autoflash exposure) to match the manually-set aperture. The flash sync speed can be set from 1/200 sec. to 30 sec. and bulb.

BULB: Bulb Exposures
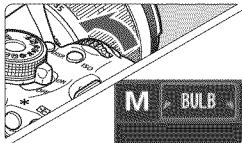
A bulb exposure keeps the shutter open for as long as you hold down the shutter button. It can be used to photograph fireworks, etc.
In step 2 on the preceding page, turn the < > dial to the left to set <BULB>. The elapsed exposure time will be displayed on the LCD monitor.

- ● During the bulb exposure, do not point the lens toward the sun. The sun's heat can damage the camera's internal components.
- ● Since bulb exposures produce more noise than usual, the image might look a little grainy.
- ● You can reduce the noise due to long exposures by setting [4: Long exp. noise reduction] to [1: Auto] or [2: On] in the [5 Custom Functions (C.Fn)] (p.253).

- ● For bulb exposures, using a tripod and Remote Switch (sold separately, p.262) is recommended.
- ● You can also use a remote controller (sold separately, p.261) for bulb exposures. When you press the remote controller's transmit button, the bulb exposure will start immediately or 2 sec. later. Press the button again to stop the bulb exposure.
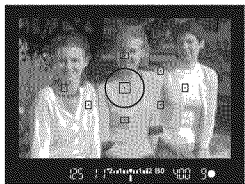
100

A-DEP: Automatic Depth-of-Field AE

Objects in the foreground and background will be in focus automatically. All the AF points will function to detect the subject, and the aperture required to attain the necessary depth of field will be set automatically.

* < A-DEP > stands for Auto-Depth of field. This mode sets the depth of field automatically.
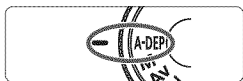
Set the Mode Dial to < A-DEP >.

Focus the subject.

- Aim the AF points over the subjects and press the shutter button halfway (⌂4).
- All the subjects covered by the AF points flashing in red will be in focus.
- If focus is not achieved, the picture cannot be taken.

Take the picture.

FAQ

- **The aperture display in the viewfinder blinks.**
  The exposure is correct, but the desired depth of field cannot be obtained. Either use a wide-angle lens or move farther away from the subjects.

- **The shutter speed display in the viewfinder blinks.**
  If the "**30"**" shutter speed blinks, it means that the subject is too dark. Increase the ISO speed. If the "**4000**" shutter speed blinks, it means that the subject is too bright. Decrease the ISO speed.

- **A slow shutter speed has been set.**
  Use a tripod to steady the camera.

- **I want to use flash.**
  Flash can be used, however, the result will be the same as using the < P > mode with flash. The desired depth of field will not be obtained.

101

⊡ Changing the Metering Mode ☆

Four methods (metering modes) to measure the subject's brightness are provided. Normally, evaluative metering is recommended.
In Basic Zone modes, evaluative metering is set automatically.
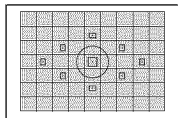
1 Select [Metering mode].

● Under the [▣ⁱ] tab, select [**Metering mode**], then press <⊛>.
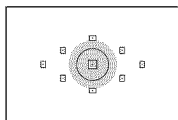
2 Set the metering mode.

● Select the desired metering mode, then press <⊛>.

⊡ Evaluative metering

This is an all-around metering mode suited for portraits and even backlit subjects. The camera sets the exposure automatically to suit the scene.

⊡ Partial metering

Effective when the background is much brighter than the subject due to backlighting, etc. The gray area in the left figure is where the brightness is metered to obtain the standard exposure.
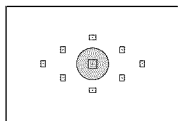
⊡ Spot metering

This is for metering a specific part of the subject or scene. The gray area in the left figure is where the brightness is metered to obtain the standard exposure. This metering mode is for advanced users.
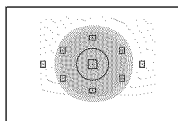
⊡ Center-weighted average metering

The brightness is metered at the center and then averaged for the entire scene. This metering mode is for advanced users.

With ⊡, the exposure setting will be locked when you press the shutter button halfway and focus is achieved. With ⊡, ⊡, and ⊡, the exposure setting is set at the moment of exposure. (The exposure setting is not locked when you press the shutter button halfway.)

102

Setting Exposure Compensation [☆]

Av⊠ Setting Exposure Compensation

Set exposure compensation if the exposure (without flash) does not come out as desired. This feature can be used in Creative Zone modes (except <**M**>). You can set the exposure compensation up to ±5 stops in 1/3-stop increments.
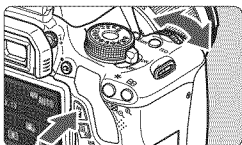
Increased exposure for a brighter image

Decreased exposure for a darker image

Making it brighter:
Hold down the < Av⊠ > button and turn the <✍> dial to the right. (Increased exposure)

Making it darker:
Hold down the < Av⊠ > button and turn the <✍> dial to the left. (Decreased exposure)

▷ As shown in the figure, the exposure level is displayed on the LCD monitor and in the viewfinder.
● **After taking the picture, cancel the exposure compensation by setting it back to 0.**

Dark exposure   Increased exposure for a brighter image

● The exposure compensation amount displayed in the viewfinder goes up to only ±2 stops. If the exposure compensation amount exceeds ±2 stops, the end of the exposure level indicator will display <◀> or <▶>.
● The exposure compensation can also be set with [◯⁑ **Expo. comp./AEB**] (p.105). If you will set exposure compensation exceeding ±2 stops, you should use [◯⁑ **Expo. comp./AEB**] to set it.

✺ Flash Exposure Compensation

Set flash exposure compensation if the flash exposure of the subject does not come out as desired. You can set the flash exposure compensation up to ±2 stops in 1/3-stop increments.

Press the <Q> button. (⌚10)

▷ The Quick Control screen will appear (p.41).

Select [✺].

● Press the <✛> key to select [✺*].
▷ [Flash exposure comp.] will be displayed at the bottom.

Set the flash exposure compensation amount.

● To make the flash exposure brighter, turn the <✇> dial to the right. To make it darker, turn the <✇> dial to the left. (Decreased exposure)

▷ When you press the shutter button halfway, the <✺> icon will appear in the viewfinder.

● After taking the picture, cancel the flash exposure compensation by setting it back to 0.
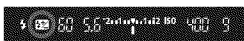
🚫 If [✿ Auto Lighting Optimizer] (p.109) is set to any setting other than [Disable], the image may look bright even if a decreased exposure compensation or decreased flash exposure compensation has been set.

📖 You can also set flash exposure compensation with [Built-in flash func. setting] in [✿ Flash control] (p.181).

[MENU] Auto Exposure Bracketing ☆

This feature takes exposure compensation a step further by varying the exposure automatically (up to ±2 stops in 1/3-stop increments) with three shots as shown below. You can then choose the best exposure. This is called AEB (Auto Exposure Bracketing).

Standard exposure
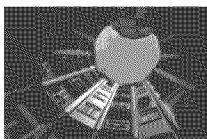
Darker exposure
(Decreased exposure)

Brighter exposure
(Increased exposure)

AEB amount

Select [Expo. comp./AEB].

● Under the [✿ː] tab, select [**Expo. comp./AEB**], then press <⊛>.
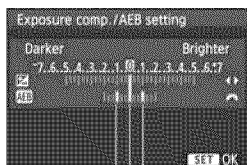
Set the AEB amount.

● Turn the <✎> dial to set the AEB amount.
● Press the <◀▶> key to set the exposure compensation amount. If AEB is combined with exposure compensation, AEB will be applied centering on the exposure compensation amount.
● Press <⊛> to set it.
● When you press the <MENU> button to exit the menu, the AEB level will be displayed on the LCD monitor.

Take the picture.

● Focus and press the shutter button completely. The three bracketed shots will be taken in this sequence: Standard exposure, decreased exposure, and increased exposure.

105

Canceling AEB

● Follow steps 1 and 2 to turn off the AEB amount display.
● The AEB setting will also be canceled automatically if the power switch is set to <OFF>, flash recycling is completed, etc.

☀ Shooting Tips

● **Using AEB with continuous shooting:**
If <⊒> continuous shooting (p.88) has been set and you press the shutter button completely, the three bracketed shots will be taken continuously in this sequence: Standard exposure, decreased exposure, and increased exposure.

● **Using AEB with <☐> single shooting.**
Press the shutter button three times to take the three bracketed shots. The three bracketed shots will be exposed in the following sequence: Standard exposure, decreased exposure, and increased exposure.

● **Using AEB with the self-timer or remote control (sold separately).**
With the self-timer or remote control (<⌖⟲> or <⟲₂>), you can take three continuous shots after a 10-sec. or 2-sec. delay. With <⟲c> (p.89) set, the number of continuous shots will be three times the number set.

● Neither flash nor bulb exposures can be used with AEB.
● If [◐⁺ **Auto Lighting Optimizer**] (p.109) is set to any setting other than [**Disable**], the AEB's effect might be minimal.

✶ Locking the Exposure ☆

You can lock the exposure when the area of focus is to be different from the exposure metering area or when you want to take multiple shots at the same exposure setting. Press the <✶> button to lock the exposure, then recompose and take the shot. This is called AE lock. It is effective for backlit subjects.
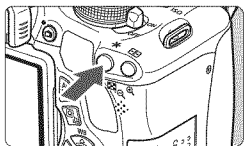
Focus the subject.

- Press the shutter button halfway.
- ▶ The exposure setting will be displayed.
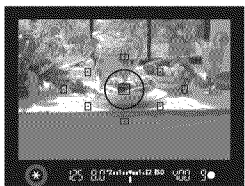
Press the <✶> button. (⏲4)

- ▶ The <✶> icon lights in the viewfinder to indicate that the exposure setting is locked (AE lock).
- Each time you press the <✶> button, it locks the current autoexposure setting.
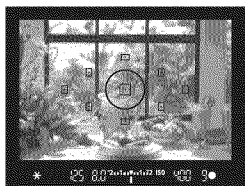
Recompose and take the picture.

- If you want to maintain the AE lock while taking more shots, hold down the <✶> button and press the shutter button to take another shot.

AE Lock Effects

Metering Mode (p.102)	AF Point Selection Method (p.85)	
	Automatic Selection	Manual Selection
ⓔ*	AE lock is applied at the AF point that achieved focus.	AE lock is applied at the selected AF point.
ⓔⓔⓔ	AE lock is applied at the center AF point.	

* When the lens' focus mode switch is set to <MF>, AE lock is applied at the center AF point.

107

✴ Locking the Flash Exposure ☆

If the subject is on the side of the frame and you use flash, the subject may turn out to be too bright or dark depending on the background, etc. This is when you should use FE lock. After setting the proper flash exposure for the subject, you can recompose (put the subject toward the side) and shoot. This feature can also be used with a Canon EX-series Speedlite.

* FE stands for Flash Exposure.

Spot metering circle
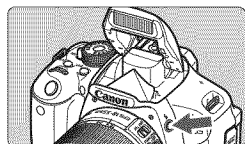
Press the <↯> button.

▷ The built-in flash will rise.
● Press the shutter button halfway and look in the viewfinder to check that the <↯> icon is lit.
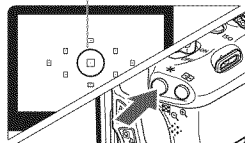
Focus the subject.

Press the <✴> button. (⏱16)

● Aim the spot-metering circle over the subject, then press the <✴> button.
▷ The flash will fire a preflash and the required flash output is calculated and retained in memory.
▷ In the viewfinder, "**FEL**" is displayed for a moment and <↯*> will light.
● Each time you press the <✴> button, a preflash is fired and the required flash output is calculated and retained in memory.

Take the picture.

● Compose the shot and press the shutter button completely.
▷ The flash is fired when the picture is taken.

🛈 If the subject is too far away and beyond the effective range of the flash, the <↯> icon will blink. Get closer to the subject and repeat steps 2 to 4.

108

MENU Correcting the Brightness and Contrast Automatically ☆

If the image comes out dark or the contrast is low, the brightness and contrast can be corrected automatically. This feature is called Auto Lighting Optimizer. The default setting is [**Standard**]. With JPEG images, the correction is done when the image is captured. For RAW images, it can be corrected with Digital Photo Professional (provided software, p.302).

Select [Auto Lighting Optimizer].

● Under the [**◘·**] tab, select [**Auto Lighting Optimizer**], then press <(SET)>.
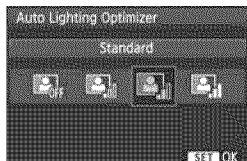
Select the setting.

● Select the desired setting, then press <(SET)>.

Take the picture.

● The image will be recorded with the brightness and contrast corrected if necessary.

Without correction   With correction

⚠ ● Under [**Ƴ· Custom Functions (C.Fn)**], if [**6: Highlight tone priority**] is set to [**1: Enable**], the Auto Lighting Optimizer will be set automatically to [**Disable**] and you cannot change this setting.
● Depending on the shooting conditions, noise might increase.
● If a setting other than [**Disable**] is set and you use exposure compensation, flash exposure compensation, or manual exposure to darken the exposure, the image might still come out bright. If you want a darker exposure, set [**Auto Lighting Optimizer**] to [**Disable**] first.

📝 In Basic Zone modes, [**Standard**] is set automatically.

109

MENU Correcting the Image's Dark Corners

Due to the lens characteristics, the four corners of the picture might look darker. This phenomenon is called lens light fall-off or drop in peripheral illumination and can be corrected automatically. The default setting is [Enable]. With JPEG images, the correction is done when the image is captured. For RAW images, it can be corrected with Digital Photo Professional (provided software, p.302).
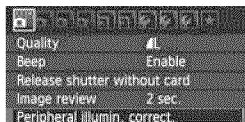
Select [Peripheral illumin. correct.].

- Under the [□] tab, select [Peripheral illumin. correct.], then press <(ET)>.
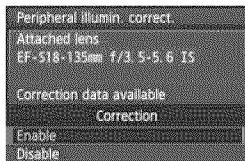
Select the setting.

- On the screen, check that [Correction data available] is displayed for the attached lens.
- If [Correction data not available] is displayed, see "About the Lens Correction Data" on the next page.
- Select [Enable], then press <(ET)>.

Take the picture.

- The image will be recorded with the corrected peripheral illumination.

Correction disabled   Correction enabled

About the Lens Correction Data

The camera already contains lens peripheral illumination correction data for approx. 25 lenses. In step 2, if you select [**Enable**], the peripheral light correction will be applied automatically for any lens whose correction data has been registered in the camera.

With EOS Utility (provided software, p.302), you can check which lenses have their correction data registered in the camera. You can also register the correction data for unregistered lenses. For details, see the Software Instruction Manual (CD-ROM) for EOS Utility (p.304).

- For JPEG images already captured, lens peripheral illumination correction cannot be applied.
- Depending on shooting conditions, noise might appear on the image periphery.
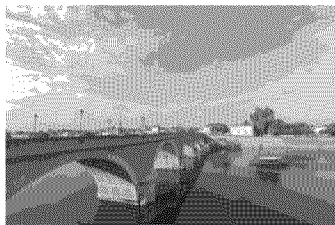- When using a non-Canon lens, setting the correction to [**Disable**] is recommended, even if [**Correction data available**] is displayed.

- Lens peripheral light correction is also applied when an Extender is attached.
- If the correction data for the attached lens has not been registered to the camera, the result will be the same as when the correction is set to [**Disable**].
- The correction amount applied will be slightly lower than the maximum correction amount settable with Digital Photo Professional (provided software).
- If the lens does not have distance information, the correction amount will be lower.
- The higher the ISO speed, the lower the correction amount will be.

111

⚙️ Customizing Image Characteristics ☆

You can customize a Picture Style by adjusting individual parameters like [**Sharpness**] and [**Contrast**]. To see the resulting effects, take test shots. To customize [**Monochrome**], see page 114.

1 Press the < ▼ ⚙️ > button.
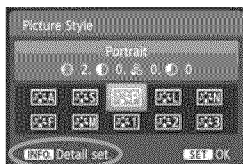
2 Select a Picture Style.

- Select a Picture Style, then press the <INFO.> button.
- ▶ The Detail set. screen will appear.
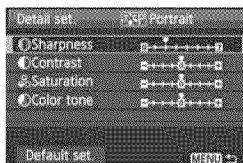
3 Select a parameter.

- Select a parameter such as [**Sharpness**], then press <㊛>.

4 Set the parameter.

- Press the <◀▶> key to adjust the parameter as desired, then press <㊛>.
- Press the <MENU> button to save the adjusted parameters. The Picture Style selection screen will reappear.
- ▶ Any parameter settings different from the default will be displayed in blue.
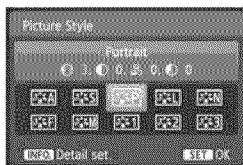
Parameter Settings and Effects

🔘 **Sharpness**
Adjusts the sharpness of the image.
To make it less sharp, set it toward the **0** end. The closer it is to **0**, the softer the image will look.
To make it sharper, set it toward the **7** end. The closer it is to **7**, the sharper the image will look.

🔘 **Contrast**
Adjusts the image contrast and the vividness of colors.
To decrease the contrast, set it toward the minus end. The closer it is to **⊟**, the blander the image will look.
To increase the contrast, set it toward the plus end. The closer it is to **⊞**, the crisper the image will look.

⛂ **Saturation**
The image's color saturation can be adjusted.
To decrease the color saturation, set it toward the minus end. The closer it is to **⊟**, the more diluted the colors will look.
To increase the color saturation, set it toward the plus end. The closer it is to **⊞**, the bolder the colors will look.

🔘 **Color tone**
The skin tones can be adjusted.
To make the skin tone redder, set it toward the minus end. The closer it is to **⊟**, the redder the skin tone will look.
To make the skin tone less red, set it toward the plus end. The closer it is to **⊞**, the more yellow the skin tone will look.

📄 ● By selecting [**Default set.**] in step 3, you can revert the respective Picture Style to its default parameter settings.
● To shoot with the Picture Style you modified, follow step 2 on page 81 to select the modified Picture Style and then shoot.

113

Monochrome Adjustment

For Monochrome, you can also set [**Filter effect**] and [**Toning effect**] in addition to [**Sharpness**] and [**Contrast**] explained on the preceding page.

Filter Effect
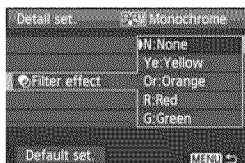
With a filter effect applied to a monochrome image, you can make white clouds or green trees stand out more.

Filter	Sample Effects
N: None	Normal black-and-white image with no filter effects.
Ye: Yellow	The blue sky will look more natural, and the white clouds will look crisper.
Or: Orange	The blue sky will look slightly darker. The sunset will look more brilliant.
R: Red	The blue sky will look quite dark. Fall leaves will look crisper and brighter.
G: Green	Skin tones and lips will look fine. Tree leaves will look crisper and brighter.

Increasing the [**Contrast**] will make the filter effect more pronounced.

Toning Effect
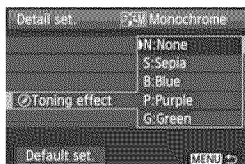
By applying a toning effect, you can create a monochrome image in that color. It can make the image look more impressive.
The following can be selected: [**N:None**], [**S:Sepia**], [**B:Blue**], [**P:Purple**] or [**G:Green**].

114

ᢖᢕᢛ Registering Preferred Image Characteristics ☆

You can select a base Picture Style such as [**Portrait**] or [**Landscape**], adjust its parameters as desired and register it under [**User Def. 1**], [**User Def. 2**], or [**User Def. 3**].
You can create Picture Styles whose parameter settings such as sharpness and contrast are different. You can also adjust the parameters of a Picture Style which has been registered to the camera with EOS Utility (provided software, p.302).

Press the < ▼ ᢖᢕᢛ > button.

Select [User Def.].

● Select [**User Def. ***], then press the <INFO.> button.

▶ The Detail set. screen will appear.
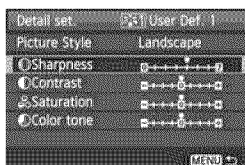
Press <⌾>.

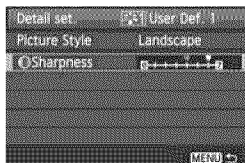● With [**Picture Style**] selected, press <⌾>.

Select the base Picture Style.

● Press the <▲▼> key to select the base Picture Style, then press <⌾>.
● To adjust the parameters of a Picture Style which has been registered to the camera with EOS Utility (provided software), select the Picture Style here.

Select a parameter.

● Select a parameter such as [**Sharpness**], then press <(SET)>.

Set the parameter.

● Press the <◄►> key to adjust the parameter as desired, then press <(SET)>.
For details, see "Customizing Image Characteristics" on pages 112-114.
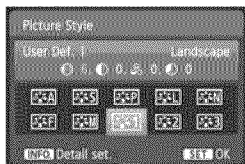
● Press the <MENU> button to register the modified Picture Style. The Picture Style selection screen will then reappear.

▶ The base Picture Style will be indicated on the right of [**User Def. ***].

● If a Picture Style has already been registered under [**User Def. ***], changing the base Picture Style in step 4 will nullify the parameter settings of the registered Picture Style.
● If you execute [**Clear all camera settings**] (p.176), all the [**User Def. ***] settings will revert to the default. Any Picture Style registered via EOS Utility (provided software) will have only its modified parameters reverted to the default setting.

To shoot with a registered Picture Style, follow step 2 on page 81 to select [**User Def. ***] and then shoot.

WB: Matching the Light Source ☆

The function adjusting the color tone so that white objects look white in the picture is called white balance (WB). Normally, the <🖸🖸> (Auto) setting will obtain the correct white balance. If natural-looking colors cannot be obtained with <🖸🖸>, you can select the white balance to match the light source or set it manually by shooting a white object.
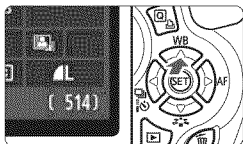
Press the < ▲ WB > button.

▶ [White balance] will appear.

Select the white balance.

● Press the < ◀▶ > key or turn the < 🎛 > dial to select the desired white balance, then press < 🖲 >.
● The "Approx. ****K" (K: Kelvin) displayed for the following white balance settings < 🌣 >, < ⛅ >, < ⛅ >, < ☀ > or < 🌊 > is the respective color temperature.

🖎 Custom White Balance

Custom white balance enables you to manually set the white balance for a specific light source for better accuracy. Do this procedure under the actual light source to be used.
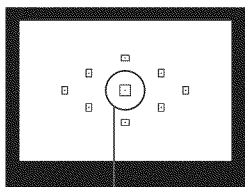
Photograph a white object.

● The plain, white object should fill the spot metering circle.
● Focus manually and set the standard exposure for the white object.
● You can set any white balance.

Spot metering circle

117

Select [Custom White Balance].

● Under the [◘⁺] tab, select [**Custom White Balance**], then press <⊛>.
▷ The custom white balance selection screen will appear.

Import the white balance data.

● Select the image that was captured in step 1, then press <⊛>.
▷ On the dialog screen which appears, select [**OK**] and the data will be imported.
● When the menu reappears, press the <MENU> button to exit the menu.

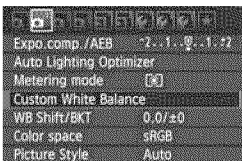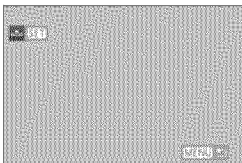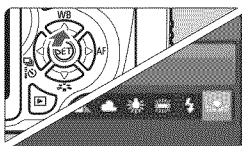## Select the custom white balance.

● Press the <▲ WB> button.
● Select [⚬⚬], then press <⊛>.

● If the exposure obtained in step 1 is way off, a correct white balance might not be obtained.
● An image captured while the Picture Style was set to [**Monochrome**] (p.82) or an image processed with a Creative filter cannot be selected in step 3.

● Instead of a white object, an 18% gray card (commercially available) can produce a more accurate white balance.
● The personal white balance registered with EOS Utility (provided software, p.302) will be registered under <⚬⚬>. If you do step 3, the data for the registered personal white balance will be erased.

⚙️ Adjusting the Color Tone for the Light Source ☆

You can correct the white balance that has been set. This adjustment will have the same effect as using a commercially-available color temperature conversion filter or color compensating filter. Each color can be corrected to one of nine levels.
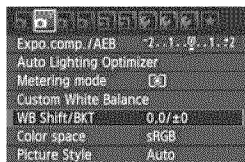
This is for advanced users who are familiar with using color temperature conversion or color compensating filters.

White Balance Correction

Select [WB Shift/BKT].

● Under the [⚙️] tab, select [**WB Shift/BKT**], then press <⒮⒠⒯>.
▶ The WB correction/WB bracketing screen will appear.

Set the white balance correction.

Sample setting: A2, G1
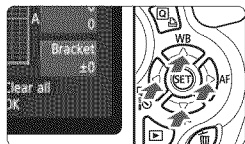
● Press the <✛> key to move the "■" mark to the desired position.
● B is for blue, A is amber, M is magenta, and G is green. The color in the respective direction will be corrected.
● On the upper right, "**Shift**" indicates the direction and correction amount.
● Pressing the <INFO.> button will cancel all the [**WB Shift/BKT**] settings.
● Press <⒮⒠⒯> to exit the setting and return to the menu.
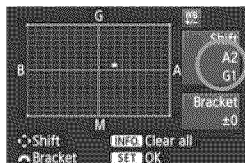
📝 ● During the white balance correction, <⚙️> will be displayed in the viewfinder and on the LCD monitor.
● One level of the blue/amber correction is equivalent to 5 mireds of a color temperature conversion filter. (Mired: Measuring unit indicating the density of a color temperature conversion filter.)

119

White Balance Auto Bracketing

With just one shot, three images having a different color balance can be recorded simultaneously. Based on the color temperature of the current white balance setting, the image will be bracketed with a blue/amber bias or magenta/green bias. This is called white balance bracketing (WB-BKT). White balance bracketing is possible up to ±3 levels in single-level increments.

B/A bias ±3 levels

Set the white balance bracketing amount.

● In step 2 for white balance correction, when you turn the < > dial, the "■" mark on the screen will change to "■ ■ ■" (3 points). Turning the dial to the right sets the B/A bracketing, and turning it to the left sets the M/G bracketing.

▷ On the right, "**Bracket**" indicates the bracketing direction and correction amount.

● Pressing the <INFO.> button will cancel all the [**WB Shift/BKT**] settings.

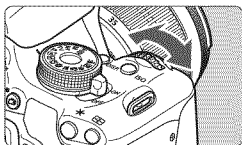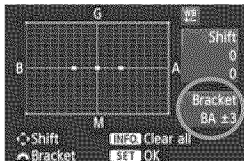● Press <(SET)> to exit the setting and return to the menu.

Bracketing Sequence

The images will be bracketed in the following sequence: 1. Standard white balance, 2. Blue (B) bias, and 3. Amber (A) bias, or 1. Standard white balance, 2. Magenta (M) bias, and 3. Green (G) bias.

During WB bracketing, the maximum burst for continuous shooting will be lower and the number of possible shots will also decrease to one-third the normal number.

● You can also set white balance correction and AEB (p.105) together with white balance bracketing. If you set AEB in combination with white balance bracketing, a total of nine images will be recorded for a single shot.

● Since three images are recorded for one shot, the card will take longer to record the shot.

● "**BKT**" stands for Bracketing.

120

[MENU] Setting the Color Reproduction Range ☆

The range of reproducible colors is called the color space. With this camera, you can set the color space to sRGB or Adobe RGB for captured images. For normal shooting, sRGB is recommended. In Basic Zone modes, sRGB is set automatically.

1 Select [Color space].
● Under the [◘'] tab, select [Color space], then press <☺>.

2 Set the desired color space.
● Select [sRGB] or [Adobe RGB], then press <☺>.

About Adobe RGB

This color space is mainly used for commercial printing and other industrial uses. This setting is not recommended if you do not know about image processing, Adobe RGB, and Design rule for Camera File System 2.0 (Exif 2.21).
The image will look very subdued in a sRGB personal computer environment and with printers not compatible with Design rule for Camera File System 2.0 (Exif 2.21). Post-processing of the image with software will therefore be required.

● If the image is captured with the color space set to Adobe RGB, the file name will start with "_MG_" (first character is an underscore).
● The ICC profile is not appended. See explanations about the ICC profile in the Software Instruction Manual (p.304) in the CD-ROM.

121

Mirror Lock-up to Reduce Camera Shake ☆

The camera's mechanical shake caused by the reflex mirror action can blur images taken with a super telephoto lens or close-up (macro) lens. In such cases, mirror lockup is effective.

Mirror lockup is enabled by setting [8: Mirror lockup] to [1: Enable] in the [♥: Custom Functions (C.Fn)] (p.255).

1 **Focus the subject, then press the shutter button completely.**

▶ The mirror will swing up.

2 **Press the shutter button completely again.**

▶ The picture is taken and the mirror goes back down.
● After taking the picture, set [8: Mirror lockup] to [0: Disable].

☀ Shooting Tips

● **Using the self-timer <ⁱ☉> <☉₂> with mirror lockup.**
When you press the shutter button completely, the mirror locks up, then the picture is taken 10 sec. or 2 sec. later.

● **Remote control shooting.**
Since you do not touch the camera when the picture is taken, remote control shooting together with mirror lockup can further prevent camera shake (p.261). With Remote Controller RC-6 (sold separately) set to a 2-sec. delay, press the transmit button and the mirror will lockup before the picture is taken 2 sec. later.

⚠ ● In very bright light such as at the beach or a ski slope on a sunny day, take the picture promptly after mirror lockup.
● Do not point the camera toward the sun. The sun's heat can damage the camera's internal components.
● If you use the self-timer and mirror lockup in combination with a bulb exposure, keep pressing the shutter button completely (self-timer delay time + bulb exposure time). If you let go of the shutter button during the self-timer countdown, there will be a shutter-release sound, but no picture will be taken.

📄 ● Even if <➡> (Continuous shooting) has been set, single shooting will take effect.
● If 30 seconds elapse after the mirror has locked up, it will go back down automatically. Pressing the shutter button completely again locks up the mirror again.

5

Shooting with the LCD Monitor (Live View Shooting)

You can shoot while viewing the image on the camera's LCD monitor. This is called "Live View shooting".

Live View shooting is effective for still subjects which do not move.
If you handhold the camera and shoot while viewing the LCD monitor, camera shake can cause blurred images.
Using a tripod is recommended.

About Remote Live View Shooting

With EOS Utility (provided software, p.302) installed in your computer, you can connect the camera to the computer and shoot remotely while viewing the computer screen. For details, see the Software Instruction Manual (p.304) in the CD-ROM.
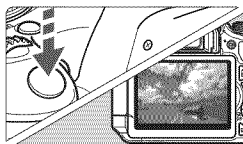
📷 Shooting with the LCD Monitor ▬▬▬▬

Display the Live View image.

- Press the <📷> button.
- ▶ The Live View image will appear on the LCD monitor.
- The Live View image will closely reflect the brightness level of the actual image you capture.

Focus the subject.

- When you press the shutter button halfway, the camera will focus with the current AF mode (p.131-137).

Take the picture.

- Press the shutter button completely.
- ▶ The picture will be taken and the captured image is displayed on the LCD monitor.
- ▶ After the image review ends, the camera will return to Live View shooting automatically.
- Press the <📷> button to exit Live View shooting.

📋
- The image's field of view is approx. 99% (when the image-recording quality is set to JPEG ◢ L).
- The metering mode will be fixed to evaluative metering for Live View shooting.
- In Creative Zone modes, you can check the depth of field by pressing the depth-of-field preview button.
- During continuous shooting, the exposure set for the first shot will also be applied to subsequent shots.
- Using <A-DEP> will be the same as using <P>.
- You can also use a remote controller (sold separately, p.261) for Live View shooting.

124

Enabling Live View Shooting
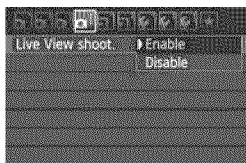
Set [**Live View shoot.**] to [**Enable**].

In Basic Zone modes, [**Live View shoot.**] will be displayed under [📷⁺], and in Creative Zone modes, it will be displayed under [📷⁝].

Battery Life with Live View Shooting [Approx. number of shots]

Temperature	Shooting Conditions	
	No Flash	50% Flash Use
At 23°C / 73°F	200	180
At 0°C / 32°F	170	150

- The figures above are based on a fully-charged Battery Pack LP-E8 and CIPA (Camera & Imaging Products Association) testing standards.
- With a fully-charged Battery Pack LP-E8, continuous Live View shooting is possible as for approx. 1 hr. 30 min. at 23°C / 73°F.
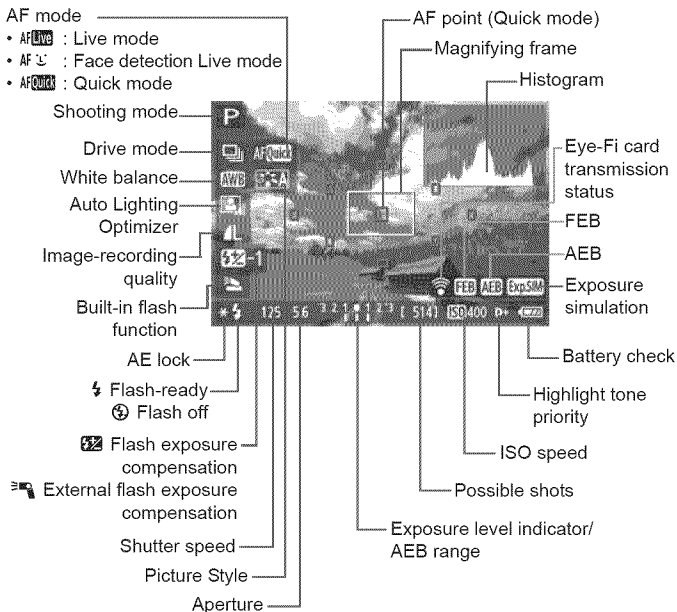
- During Live View shooting, do not point the lens toward the sun. The sun's heat can damage the camera's internal components.
- **Cautions for using Live View shooting are on pages 139-140.**

- When flash is used, there will be two shutter sounds, but only one shot will be taken.
- If the camera is not operated for a prolonged period, the power will turn off automatically as set with [💡 **Auto power off**] (p.167). If [💡 **Auto power off**] is set to [**Off**], the Live View function will terminate automatically after 30 min. (camera power remains on).
- With the AV cable (provided) or HDMI cable (sold separately), you can display the Live View image on a TV (p.218, 221).

125

About the Information Display

● Each time you press the <INFO.> button, the information display will change.

AF mode
• AF𝗟𝗶𝘃𝗲 : Live mode
• AF👁 : Face detection Live mode
• AF𝗤𝘂𝗶𝗰𝗸 : Quick mode

Shooting mode

Drive mode

White balance

Auto Lighting Optimizer

Image-recording quality

Built-in flash function

AE lock

⚡ Flash-ready
🚫 Flash off

𝟱𝟮 Flash exposure compensation

📷 External flash exposure compensation

Shutter speed

Picture Style

Aperture

AF point (Quick mode)

Magnifying frame

Histogram

Eye-Fi card transmission status

FEB

AEB

Exposure simulation

Battery check

Highlight tone priority

ISO speed

Possible shots

Exposure level indicator/ AEB range

● When <ExpSIM> is displayed in white, it indicates that the Live View image brightness is close to what the captured image will look like.
● If <ExpSIM> is blinking, it indicates that the Live View image is not being displayed at the suitable brightness due to low- or bright-light conditions. However, the actual image recorded will reflect the exposure setting.
● If flash is used or bulb is set, the <ExpSIM> icon and histogram will be grayed out (for your reference). The histogram might not be properly displayed in low- or bright-light conditions.

126

Final Image Simulation

The final image simulation reflects the effects of the Picture Style, white balance, etc., in the Live View image so you can see what the captured image will look like.
During shooting, the Live View image will automatically reflect the function settings listed below.

Final image simulation during Live View shooting
- Picture Style
  * All parameters such as sharpness, contrast, color saturation, and color tone will be reflected.
- White balance
- White balance correction
- Shoot by ambience selection
- Shoot by lighting or scene type
- Exposure
- Depth of field (With depth-of-field preview button ON)
- Auto Lighting Optimizer
- Peripheral illumination correction
- Highlight tone priority
- Aspect ratio (Image area confirmation)

Shooting Function Settings

Function settings particular to Live View shooting are explained here.

[Q] Quick Control

While the image is displayed on the LCD monitor in Creative Zone modes, pressing the <[Q]> button will enable you to set the AF mode, drive mode, white balance, Picture Style, Auto Lighting Optimizer, image-recording quality, and built-in flash settings. In Basic Zone modes, you can set the AF mode and the settings shown in the table on page 64.

Press the <[Q]> button.

- ▶ The functions settable with Quick Control will appear on the left of the screen.
- ● If the AF mode is < AFQuick >, the AF points will also be displayed. You can also select the AF point.

Select a function and set it.

- ● Press the <▲▼> key to select a function.
- ▶ The selected function and Feature guide (p.48) will appear.
- ● Press the <◄►> key or turn the <✺> dial to change the setting. Pressing <(SET)> will display the respective function's setting screen.

In Creative Zone modes, you can set the ISO speed by pressing the <ISO> button.

128

◘ Menu Function Settings
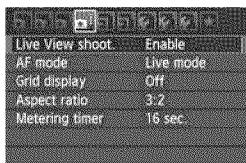
The menu options below are displayed.

In Basic Zone modes, the Live View menu options will be displayed under [◘'], and in Creative Zone modes, they will be displayed under [◘].

● **Live View shooting**

You can set Live View shooting to [**Enable**] or [**Disable**].

● **AF mode**

You can select [**Live mode**] (p.131), [ᵂ **Live mode**] (p.132), or [**Quick mode**] (p.136).

● **Grid display**

With [**Grid 1 ⊞**] or [**Grid 2 ⊞**], you can display grid lines. It can help you level the camera vertically or horizontally.

● **Aspect ratio** ☆

The image's aspect ratio can be set to [**3:2**], [**4:3**], [**16:9**], or [**1:1**]. The following aspect ratios will be indicated with lines on the Live View image: [**4:3**] [**16:9**] [**1:1**].

JPEG images will be saved with the set aspect ratio.

RAW images will always be saved with the [**3:2**] aspect ratio. Since the aspect ratio information is appended to the RAW image, the image will be generated in the respective aspect ratio when you process the RAW image with the provided software. In the case of the [**4:3**], [**16:9**], and [**1:1**] aspect ratios, the aspect-ratio lines will appear during image playback, but the lines are not actually drawn on the image.

The settings for these menu options will apply only to Live View shooting. They do not take effect during viewfinder shooting.

129

Quality	Aspect Ratio and Pixel Count			
	3:2	4:3	16:9	1:1
L RAW	5184x3456 (18.0 megapixels)	4608x3456 (16.0 megapixels)	5184x2912* (15.1 megapixels)	3456x3456 (11.9 megapixels)
M	3456x2304 (8.0 megapixels)	3072x2304 (7.0 megapixels)	3456x1944 (6.7 megapixels)	2304x2304 (5.3 megapixels)
S1	2592x1728 (4.5 megapixels)	2304x1728 (4.0 megapixels)	2592x1456* (3.8 megapixels)	1728x1728 (3.0 megapixels)
S2	1920x1280 (2.5 megapixels)	1696x1280* (2.2 megapixels)	1920x1080 (2.1 megapixels)	1280x1280 (1.6 megapixels)
S3	720x480 (350,000 pixels)	640x480 (310,000 pixels)	720x400* (290,000 pixels)	480x480 (230,000 pixels)

- Asterisked image-recording qualities do not exactly match the set aspect ratio.
- The image area displayed for asterisked image-recording qualities is slightly larger than the recorded area. Check the captured images on the LCD monitor when shooting.
- If you use a different camera to directly print images shot with this camera in the 1:1 aspect ratio, the images might not be correctly printed.

- **Metering timer** ☆
  You can change how long the exposure setting is displayed (AE lock time). This option is not displayed in Basic Zone modes. (Metering timer is fixed at 16 sec.)

If you select [◘ Dust Delete Data], [♥ Sensor cleaning], [♥ Clear settings], or [♥ Firmware Ver.], the Live View shooting will terminate.

Changing the Autofocus Mode

Selecting the AF Mode

The AF modes available are **[Live mode]**, **[⌣ Live mode]** (face detection, p.132), and **[Quick mode]** (p.136).
If you want to achieve precise focus, set the lens focus mode switch to <**MF**>, magnify the image, and focus manually (p.138).
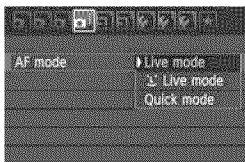
Select the AF mode.

● Under the [⚙️] tab, select [AF mode] ([⚙️] tab in Basic Zone modes).
● Select the desired AF mode, then press <⬆️>.
● While the Live View image is displayed, you can press the <Q> button to select the AF mode on the Quick Control screen (p.128).

Live Mode: AF⚙️

The image sensor is used to focus. Although AF is possible with the Live View image displayed, **the AF operation will take longer than with the Quick mode**. Also, achieving focus may be more difficult than with the Quick mode.
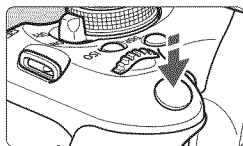
Display the Live View image.

● Press the <📷> button.
▶ The Live View image will appear on the LCD monitor.
▶ The AF point <☐> will appear.

AF point

Move the AF point.

● Press the <✦> key to move the AF point to where you want to focus (it cannot go to the edges of the picture).
● To return the AF point to the center, press the <⬆️> or <🗑> button.

131

Focus the subject.

- Aim the AF point over the subject and press the shutter button halfway.
- ▶ When focus is achieved, the AF point will turn green and the beeper will sound.
- ▶ If focus is not achieved, the AF point will turn orange.

Take the picture.

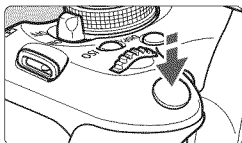- Check the focus and exposure, then press the shutter button completely to take the picture (p.124).

⛶ (Face detection) Live Mode: AF ⛶

With the same AF method as the Live mode, human faces are detected and focused. Have the target person face the camera.

Display the Live View image.

- Press the <◻> button.
- ▶ The Live View image will appear on the LCD monitor.
- When a face is detected, the <⛶> frame will appear over the face to be focused.
- If multiple faces are detected, <◀⛶▶> will be displayed. Press the <◀▶> key to move the <◀⛶▶> frame over the desired target face.

132

Focus the subject.

- Press the shutter button halfway and the camera will focus the face covered by the < > frame.
- When focus is achieved, the AF point will turn green and the beeper will sound.
- If focus is not achieved, the AF point will turn orange.
- If a face cannot be detected, the AF point <□> will be displayed and AF will be executed at the center.

Take the picture.

- Check the focus and exposure, then press the shutter button completely to take the picture (p.124).


- If the focus is way off, face detection will not be possible. If the lens enables manual focusing even while the lens focus mode switch is set to <**AF**>, turn the focusing ring to attain rough focus. The face will then be detected and < > will be displayed.
- An object other than a human face might be detected as a face.
- Face detection will not work if the face is very small or large in the picture, too bright or too dark, titled horizontally or diagonally, or partially hidden.
- The < > focusing frame might cover only part of the face.

- When you press the <⊛> or <🗑> button, the AF mode will switch to the Live mode (p.131). You can press the <✧> key to move the AF point. Press the <⊛> or <🗑> button again to return to the (face detection) Live mode.
- Since AF is not possible with a face detected near the edge of the picture, the < > will be grayed out. Then if you press the shutter button halfway, the center AF point <□> will be used to focus.

133

Live Mode and ت (Face Detection) Live Mode Notes

AF operation

- Focusing will take slightly longer.
- Even when focus has been achieved, pressing the shutter button halfway will focus again.
- The image brightness may change during and after the AF operation.
- If the light source changes while the Live View image is displayed, the screen might flicker and focusing may be difficult. If this happens, stop the Live View shooting and autofocus under the actual light source first.
- If you press the <⊕> button in the Live mode, the image will be magnified at the AF point. If focusing is difficult in the magnified view, return to the normal view and autofocus. Note that the AF speed may differ between the normal and magnified views.
- If you autofocus in the Live mode's normal view and then magnify the image, the focus might be off.
- In the ت Live mode, pressing the <⊕> button will not magnify the image.

- In the Live mode or ت (face detection) Live mode, if you shoot a peripheral subject and it is slightly out of focus, aim the center AF point over the subject to focus, then take the picture.
- The AF-assist beam will not be emitted. However, if an EX-series Speedlite (sold separately) equipped with a LED light is used, the LED light will turn on for AF-assist when necessary in the Live mode and ت (face detection) Live mode.

134

Shooting conditions which can make focusing difficult:

- Low-contrast subjects such as the blue sky and solid-color, flat surfaces.
- Subjects in low light.
- Stripes and other patterns where there is contrast only in the horizontal direction.
- Under a light source whose brightness, color, or pattern keeps changing.
- Night scenes or points of light.
- Under fluorescent lighting or when the image flickers.
- Extremely small subjects.
- Subjects at the edge of the picture.
- Subjects strongly reflecting light.
- The AF point covers both a near and faraway subject (such as an animal in a cage).
- Subjects which keep moving within the AF point and cannot keep still due to camera shake or subject blur.
- A subject approaching or moving away from the camera.
- Autofocusing while the subject is way out of focus.
- Soft focus effect is applied with a soft focus lens.
- A special effects filter is used.

Quick Mode: AF**Quick**

The dedicated AF sensor is used to focus in One-Shot AF mode (p.83), using the same AF method as with viewfinder shooting.
Although you can focus the target area quickly, **the Live View image will be interrupted momentarily during the AF operation.**
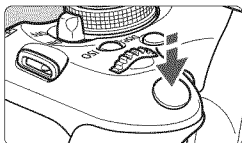
AF point

Magnifying frame

Display the Live View image.

- Press the <☐> button.
- ▶ The Live View image will appear on the LCD monitor.
- The small boxes on the screen are the AF points, and the larger box is the magnifying frame.

Select the AF point. ☆

- Press the <ⓠ> button (⌖10) to display the Quick Control screen.
- ▶ The settable functions will be displayed on the left of the screen.
- Press the <▲▼> key to make the AF point selectable.
- Turn the <✎⌃> dial to select the AF point.

136

Focus the subject.

- Aim the AF point over the subject and press the shutter button halfway.
- ▶ The Live View image will turn off, the reflex mirror will go back down, and AF will be executed.
- ▶ When focus is achieved, the AF point which achieved focus will turn green and the Live View image will reappear.
- ▶ If focus is not achieved, the AF point will turn orange and blink.
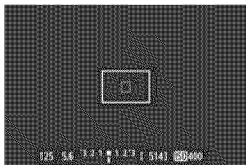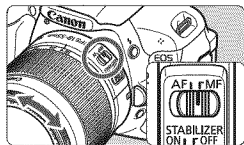
Take the picture.

- Check the focus and exposure, then press the shutter button completely to take the picture (p.124).

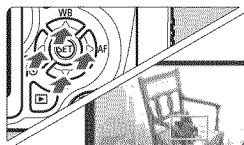You cannot take a picture during autofocusing. Take the picture while the Live View image is displayed.

137

MF: Focusing Manually

You can magnify the image and focus precisely manually.

Set the lens focus mode switch to <MF>.

- Turn the lens focusing ring to focus roughly.

Move the magnifying frame.

- Press the < ✧ > key to move the magnifying frame to the position where you want to focus.
- To return the magnifying frame to the center, press the < (SET) > or < 📷 > button.

Magnifying frame

Magnify the image.

- Press the < ⊕ > button.
- The area within the magnifying frame will be magnified.
- Each time you press the < ⊕ > button, the view will change as follows:

→ 5x → 10x → Normal view ⌐

Focus manually.

- While looking at the magnified image, turn the lens focusing ring to focus.
- After achieving focus, press the < ⊕ > button to return to the normal view.

AE lock

Magnified area position

Magnification

Take the picture.

- Check the focus and exposure, then press the shutter button to take the picture (p.124).

Live View Shooting Cautions

White <⚠> and Red <⚠> Internal Temperature Warning Icons

- If the camera's internal temperature increases due to prolonged Live View shooting or a high ambient temperature, a white <⚠> icon will appear. If you continue shooting while this icon is displayed, the image quality of still photos may deteriorate. You should stop the Live View shooting and allow the camera to cool down before shooting again.

- If the camera's internal temperature further increases while the white <⚠> icon is displayed, a red <⚠> icon will start blinking. This blinking icon is a warning that the Live View shooting will soon be terminated automatically. If this happens, you will not be able to shoot again until the camera's internal temperature decreases. Turn off the power and let the camera rest for a while.

- Shooting with the Live View function at a high temperature for a prolonged period will cause the <⚠> and <⚠> icons to appear earlier. When not shooting, turn off the camera.

Live View Image Cautions

- Under low- or bright-light conditions, the Live View image might not reflect the brightness of the captured image.

- If the light source within the image changes, the screen might flicker. If this happens, stop the Live View shooting and resume shooting under the actual light source to be used.

- If you point the camera in a different direction, it might throw off the Live View image's correct brightness momentarily. Wait until the brightness level stabilizes before shooting.

- If there is a very bright light source in the picture, such as the sun, the bright area might appear black on the LCD monitor. However, the actual captured image will correctly show the bright area.

- In low light, if you set the [♥ **LCD brightness**] to a bright setting, chrominance noise may appear in the Live View image. However, the chrominance noise will not be recorded in the captured image.

- When you magnify the image, the image sharpness may look more pronounced than it really is.

139

⚠ Live View Shooting Cautions

Shooting Result Cautions

- When you shoot continuously with the Live View function for a long period, the camera's internal temperature may increase and it can degrade image quality. Terminate Live View shooting when not shooting images.
- Before taking a long exposure, stop Live View shooting temporarily and wait several minutes before shooting. This is to prevent image degradation.
- Live View shooting in high temperatures and at high ISO speeds may cause noise or irregular colors.
- When you shoot at high ISO speeds, noise (banding, dots of light, etc.) may become noticeable.
- If you take the picture during magnified view, the exposure might not come out as desired. Return to the normal view before taking the picture. During the magnified view, the shutter speed and aperture will be displayed in orange. Even if you take the picture during magnified view, the image will be captured in the normal view.
- If [⚙ Auto Lighting Optimizer] (p.109) is not set to [Disable], the image may look bright even if a decreased exposure compensation or decreased flash exposure compensation has been set.
- If you use a TS-E lens to shift the lens vertically or use an Extension Tube, the standard exposure might not be obtained or an irregular exposure may result.
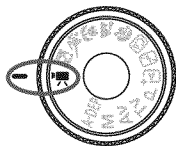
Custom Function Cautions

- During Live View shooting, certain Custom Function settings will not take effect (p.251).

Lens and Flash Cautions

- The focus preset feature on super telephoto lenses cannot be used.
- FE lock is not possible when the built-in flash or an external Speedlite is used. Modeling flash will not work with an external Speedlite.

Shooting Movies

Set the Mode Dial to <'🎥> to shoot movies. The movie recording format will be MOV.

Cards which can record movies

When shooting movies, use a large-capacity SD card rated SD Speed Class 6 "CLASS⑥" or higher.

If you use a slow-writing card when shooting movies, the movie might not be recorded properly. And if you playback a movie on a card having a slow reading speed, the movie might not playback properly.

To check the card's read/write speed, refer to the card manufacturer's Web site.

About Full HD 1080

Full HD 1080 indicates compatibility with High-Definition featuring 1080 vertical pixels (scanning lines).

FULL HD
1080

'🎥 Shooting Movies

Connecting the camera to a TV set is recommended to playback the movies shot (p.218, 221).

Autoexposure Shooting

Set the Mode Dial to <'🎥>.

▶ The reflex mirror will make a sound, then the image will appear on the LCD monitor.
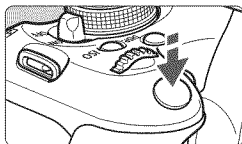
Focus the subject.

● Before shooting a movie, autofocus or manual focus (p.131-138).
● When you press the shutter button halfway, the camera will focus with the current AF mode.

Shoot the movie.

● Press the <🔲> button to start shooting a movie. To stop movie shooting, press <🔲> again.
▶ While the movie is being shot, the "●" mark will be displayed on the upper right of the screen.

Recording movie
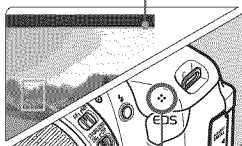
Microphone

- During movie shooting, do not point the lens toward the sun. The sun's heat can damage the camera's internal components.
- **Cautions for movie shooting are on pages 163 and 164.**
- **If necessary, also read the Live View shooting cautions on pages 139 and 140.**

- The ISO speed, shutter speed, and aperture are set automatically.
- AE lock is possible by pressing the <✱> button (p.107). To cancel AE lock during movie shooting, press the <⊡> button.
- By holding down the <Av⊠> button and turning the <△> dial, you can set the exposure compensation.
- Pressing the shutter button halfway displays the shutter speed, aperture, and ISO speed (p.146) on the screen's bottom. This is the exposure setting for taking a still photo.
- On the shooting information display (p.227), if you playback a movie shot with autoexposure, the shutter speed and aperture will not be displayed. The image information (Exif) will record the settings used at the start of the movie shooting.

Using an EX-series Speedlite (Sold Separately) Equipped with a LED Light

This camera is compatible with the function turning on the LED light automatically in low-light conditions during autoexposure shooting. **For details, see the EX-series Speedlite's instruction manual.**

143

Manual Exposure Shooting

You can manually set the shutter speed, aperture, and ISO speed for movie shooting. Using manual exposure to shoot movies is for advanced users.

Set the Mode Dial to <'🎥>.

▶ The reflex mirror will make a sound, then the image will appear on the LCD monitor.
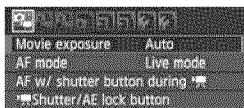
Select [Movie exposure].

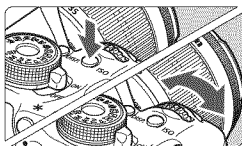● Press the <MENU> button and under the [🎥'] tab, select [Movie exposure], then press <⊙>.

Select [Manual].

● Select [Manual], then press <⊙>.

Set the shutter speed and aperture.

● To set the shutter speed, turn the <🎛> dial. The settable shutter speeds depend on the frame rate <🎞>.
  • 🎞60 / 🎞50   : 1/4000 sec. - 1/60 sec.
  • 🎞30 / 🎞25 / 🎞24 : 1/4000 sec. - 1/30 sec.
● To set the aperture, hold down the <Av☒> button and turn the <🎛> dial.

Set the ISO speed.

● Press the <ISO> button and press the <◀▶> key or turn the <🎛> dial to select the ISO speed.
  • [AUTO] setting   : ISO 100 - 6400
  • Manual ISO setting : ISO 100 - 6400

6 Focus and shoot the movie.

- The procedure is the same as steps 2 and 3 for "Autoexposure Shooting" (p.142).

⚠ ● AE lock and exposure compensation cannot be set.
● Changing the shutter speed or aperture during movie shooting is not recommended since the changes in the exposure will be recorded.
● If you use a lens whose maximum aperture changes while you zoom, you should not zoom while shooting a movie. Changes in the exposure may be recorded.
● If you shoot a movie under fluorescent lighting, the movie image might flicker.

📝 ● With ISO Auto, the standard movie exposure will usually be obtained even if the light level changes.
● When shooting a movie of a moving subject, a shutter speed of 1/30 sec. to 1/125 sec. is recommended. The faster the shutter speed, the less smooth the subject's movement will look.

145

About the Information Display

● Each time you press the <INFO.> button, the information display will change.

Picture Style

AF mode
- AF[Live] : Live mode
- AF ⌣ : Face detection Live mode
- AF[Quick] : Quick mode

Movie shooting mode

White balance

Auto Lighting Optimizer

Image-recording quality

Movie recording size

Video snapshot

AE lock

LED light

Frame rate

Shutter speed

Aperture

Video snapshot shooting duration

Movie shooting remaining time/ Elapsed time

AF point (Quick mode)

Magnifying frame

Recording movie

Digital zoom magnification

Battery check

Exposure mode
- : Autoexposure
- : Manual exposure

Highlight tone priority

Rec. level: Manual

ISO speed

Possible shots

Exposure compensation amount

* When an Eye-Fi card has been inserted in the camera, the Eye-Fi transmission status (p.265) will be displayed.

● If there is no card in the camera, the movie shooting remaining time will be displayed in red.
● When movie shooting starts, the movie shooting remaining time will change to the elapsed time.

146

Notes for Both Autoexposure and Manual Exposure Shooting

- A movie file is recorded each time you shoot a movie.
- The image's field of view is approx. 99%.
- The sound will be recorded by the camera's built-in monaural microphone (p.142).
- Stereo sound recording is possible by connecting an external microphone (commercially available) equipped with a stereo mini plug (3.5mm dia.) to the camera's external microphone IN terminal (p.18).
- Movie-related settings are under the [🎥], [🎥], and [🎥] menu tabs (p.157).
- With a fully-charged Battery Pack LP-E8, the total shooting time will be as follows: At 23°C/73°F: Approx. 1 hr. 40 min., At 0°C/32°F: Approx. 1 hr. 20 min.

Final Image Simulation

The final image simulation reflects the effects of the Picture Style, white balance, etc., in the movie image so you can see what the captured movie will look like.
During movie shooting, the movie image will automatically reflect the settings listed below.

Final image simulation for movie shooting

- Picture Style
  * All parameters such as sharpness, contrast, color saturation, and color tone will be reflected.
- White balance
- Exposure
- Depth of field
- Auto Lighting Optimizer
- Peripheral illumination correction
- Highlight tone priority

147

Shooting Still Photos
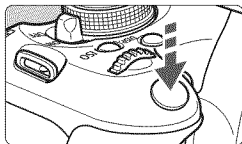
While shooting a movie, you can also take a still photo by pressing the shutter button completely.

Shooting Stills in the <'🎥> Mode

⦿ If you take a still photo during movie shooting, the movie will record a still moment lasting approx. 1 sec.

⦿ The captured still photo will be recorded to the card, and the movie shooting will resume automatically when the Live View image is displayed.

⦿ The movie and still photo will be recorded as separate files on the card.

⦿ Functions particular to still shooting are shown below. Other functions will be the same as for movie shooting.

Function	Settings
Image-recording quality	As set in [◻ Quality]. When the movie-recording size is [**1920x1080**] or [**1280x720**], the aspect ratio will be 16:9. When the size is [**640x480**], the aspect ratio will be 4:3.
Exposure setting	• Autoexposure shooting: Shutter speed and aperture automatically set (displayed when pressing the shutter button halfway). • Manual exposure shooting: Shutter speed and aperture manually set.
AEB	Canceled
Drive mode	Single shooting (Self-timer not possible)
Flash	Flash off

Shooting Function Settings

Function settings particular to movie shooting are explained here.

[Q] Quick Control

While the image is displayed on the LCD monitor, you can press the <[Q]> button to set the AF mode, white balance, Picture Style, Auto Lighting Optimizer, image-recording quality (for still photos), movie-recording size, movie digital zoom, and video snapshots.

Press the <[Q]> button. (⏲10)

▶ The functions settable with Quick Control will appear on the left of the screen.

● If the AF mode is <AF Quick>, the AF point will also be displayed.

Select a function and set it.

● Press the <▲▼> key to select a function.

▶ The selected function and Feature guide (p.48) will appear.

● Press the <◄►> key or turn the <✲> dial to change the setting. Pressing <⊛> will display the respective function's setting screen.

📋 The image-recording quality setting will be reflected in all shooting modes.

149

MENU Setting the Movie-recording Size
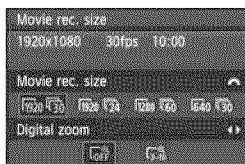
Under the [Ô⬛] tab, [**Movie rec. size**] enables you to select the movie's image size [****x****] and frame rate [⬚*] (frames recorded per second). The ⬚* (frame rate) switches automatically depending on the [Ψ: **Video system**] setting.

◉ **Image size**
[**1920x1080**] : Full High-Definition (Full HD) recording quality.
[**1280x720**] : High-Definition (HD) recording quality.
[**640x480**] : Standard-definition recording quality. The aspect ratio will be 4:3.

◉ **Frame rate** (fps: frames per second)
[⬚60] [⬚30] : For areas where the TV format is NTSC (North America, Japan, Korea, Mexico, etc.).
[⬚50] [⬚25] : For areas where the TV format is PAL (Europe, Russia, China, Australia, etc.).
[⬚24] : Mainly for motion pictures.

📓 When [**1920x1080**] is set as movie recording size, you can use the digital zoom. For the setting procedure, see page 152.

150

Total Movie Recording Time and File Size Per Minute

Due to limitations of the file system, movie shooting will stop automatically if the file size of a single movie clip reaches 4GB. To resume movie shooting, press the < > button. (A new movie file starts being recorded.)

Movie-recording Size		Total Recording Time (approx.)			File Size (approx.)
		4GB Card	8GB Card	16GB Card	
[1920x1080]	30 25 24	11 min.	22 min.	44 min.	330 MB/min.
[1280x720]	60 50	11 min.	22 min.	44 min.	330 MB/min.
[640x480]	30 25	46 min.	1 hr. 32 min.	3 hr. 4 min.	82.5 MB/min.

⚠ ● An increase of the camera's internal temperature may cause movie shooting to stop before the maximum recording time shown in the table above (p.163).
● The maximum recording time of one movie clip is 29 min. 59 sec. Depending on the subject and the increase in the camera's internal temperature, the movie shooting might stop sooner than 29 min. 59 sec.

▤ With ZoomBrowser EX/ImageBrowser (provided software, p.302), you can extract still photos from a movie. The still image quality will be as follows: Approx. 2.1 megapixels at [1920x1080], approx. 920,000 pixels at [1280x720], and approx. 310,000 pixels at [640x480].

151

MENU Using Movie Digital Zoom

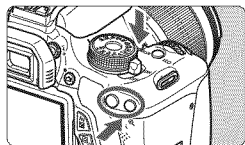When the image size is set to [**1920x1080**] (Full HD), you can shoot with an approx. 3x to 10x digital zoom.
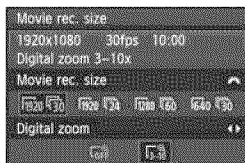
Select [1920x1080 ⬛ꭗ].

● Under the [🎬] tab, set [**Movie rec. size**] to [**1920x1080** ⬛ꭗ] by turning the < ⬡ > dial.

Set the digital zoom.

● Press the < ◄► > key to select [🔍³⁻¹⁰], then press < ⟨SET⟩ >.
● Press the <MENU> button to exit the menu and return to movie shooting.

Use digital zoom.

● While holding down the <DISP.> button, press the < ⊕ > (zoom in) or < 🔲·Q > (zoom out) button.
● In step 2, you can cancel digital zoom by selecting [**OFF**].

⚠ ● Using a tripod is recommended to prevent camera shake.
● The image cannot be magnified for focusing.
● Even if the AF mode has been set to [**Quick mode**], it will switch automatically to [**Live mode**] during movie shooting. Also, in [**Live mode**], the AF point is displayed larger than with other recording sizes.
● Since the image is processed digitally when using the digital zoom, the higher the zoom magnification, the rougher it will look.
● If you use digital zoom, noise and light spots may be more visible.
● Focusing may be difficult if the AF point covers both a near and far subject.
● Still photo shooting is not possible.

152

[MENU] Taking Video Snapshots

You can easily create a short movie with the video snapshot function. A video snapshot is a short movie clip lasting 2 sec., 4 sec., or 8 sec. A collection of video snapshots is called a video snapshot album and can be saved to the card as a single movie file. By changing the scene or angle in each video snapshot, you can create dynamic short movies. A video snapshot album can also be played together with background music (p.156, 213).
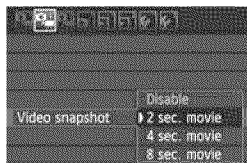
Video Snapshot Album Concept

Video snapshot 1 + Video snapshot 2 ·· Video snapshot x

Video snapshot album
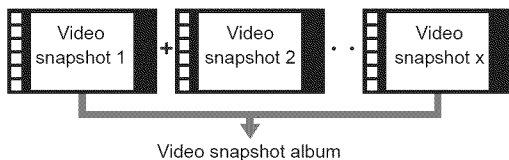
Setting the Video Snapshot Shooting Duration

In step 2 below, you can select [**2 sec. movie**] for example, and each video snapshot you shoot will be 2 sec. long.

Movie rec. size	1920x1080
Sound recording	Auto
Metering timer	16 sec.
Grid display	Off
Video snapshot	Disable
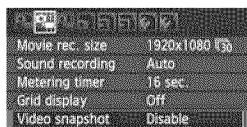
Select [Video snapshot].

● Under the [🎬] tab, select [**Video snapshot**].

	Disable
Video snapshot	▶2 sec. movie
	4 sec. movie
	8 sec. movie

Select the [Video snapshot] shooting duration.

● Press the <▲▼> key to select the video snapshot shooting duration, then press <(SET)>.
● Press the <MENU> button to exit the menu and return to movie shooting,

153

Creating a Video Snapshot Album
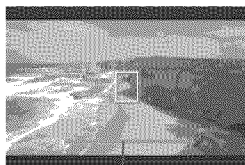
Shooting duration

Shoot the first video snapshot.

- Press the < > button to shoot.
- ▶ The blue bars indicating the shooting duration will gradually decrease. After the set shooting duration elapses, the shooting stops automatically.
- ▶ After the LCD monitor turns off and the access lamp stops blinking, the confirmation screen will appear.
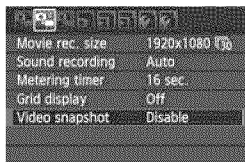

Save as a video snapshot album.

- Press the < ◀▶ > key to select [**Save as album**], then press < ⓢ️ⓔ️ⓣ️ >.
- ▶ The movie clip will be saved as the video snapshot album's first video snapshot.

Continue to shoot more video snapshots.

- Repeat step 3 to shoot the next video snapshot.
- Press the < ◀▶ > key to select [**Add to album**], then press < ⓢ️ⓔ️ⓣ️ >.
- To create another video snapshot album, select [**Save as a new album**].

Quit the video snapshot shooting.

- Set [**Video snapshot**] to [**Disable**]. **To return to normal movie shooting, be sure to set [Disable].**
- Press the <MENU> button to exit the menu and return to normal movie shooting,

Options in Steps 4 and 5

Option	Description
🎞 Save as album (Step 4)	The movie clip will be saved as the video snapshot album's first video snapshot.
🎞 Add to album (Step 5)	The video snapshot just recorded will be added to the album recorded immediately before.
🎞 Save as a new album (Step 5)	A new video snapshot album is created and the movie clip is saved as the first video snapshot. The new album will be a different file from the previously recorded album.
🎞 Playback video snapshot (Steps 4 and 5)	The video snapshot just recorded will be played. For playback operations, see the table below.
🎞 Do not save to album (Step 4) 🎞 Delete without saving to album (Step 5)	If you want to delete the video snapshot you just recorded and not save it to the album, select [OK].

[Playback video snapshot] Operations

Operation	Playback Description
� Exit	Returns to the previous screen.
▶ Play	By pressing <(SET)>, you can play or pause the just-recorded video snapshot.
▮◀ First frame	Displays the first scene of the album's first video snapshot.
◀ Skip backward*	Each time you press <(SET)>, the video snapshot skips back by a few seconds.
◀▮▮ Previous frame	Each time you press <(SET)>, a single previous frame is displayed. If you hold down <(SET)>, it will rewind the movie.
▮▮▶ Next frame	Each time you press <(SET)>, the movie will play frame-by-frame. If you hold down <(SET)>, it will fast forward the movie.
▶▮ Skip forward*	Each time you press <(SET)>, the video snapshot skips forward by a few seconds.
▶▶▮ Last frame	Displays the last scene of the album's last video snapshot.
▬▬▬	Playback position
mm' ss"	Playback time (minutes:seconds)
📶 Volume	You can adjust the built-in speaker's (p.210) sound volume by turning the <🔆> dial.

* With [Skip backward/Skip forward], the skipping duration will correspond to the number of seconds set under [Video snapshot] (approx. 2 sec., 4 sec., or 8 sec.).

155

⚠ ● You can add to an album only video snapshots having the same duration (approx. 2 sec., 4 sec., or 8 sec. each). If you stop shooting a video snapshot before the set shooting duration elapses, the video snapshot will be added to the preceding album. And a new album will be created for subsequent video snapshots.
● Note that if you do any of the following while shooting video snapshots, a new album will be created for subsequent video snapshots.
  • Changing the [**Movie rec. size**] (p.150).
  • Changing the [**Video snapshot**] shooting duration (p.153).
  • Changing the [**Sound rec.**] setting from [**Auto/Manual**] to [**Disable**] or from [**Disable**] to [**Auto/Manual**] (p.160).
  • Opening/closing the card slot cover or battery compartment cover.
  • Interrupting the use of AC Adapter Kit ACK-E8 (sold separately).
  • Updating the firmware.
● You cannot change the order of the video snapshots in an album or add more video snapshots to the album later.
● You cannot take still photos while shooting a video snapshot.
● The shooting duration of a video snapshot is only approximate. Depending on the frame rate, the shooting duration displayed during playback might not be exact.

Playing an Album

You can playback a completed album in the same way as a normal movie. For details, see pages 212 and 217.

● Press the <▶> button.
● Press the <◀▶> key to select an album, then press <⊛>.
● Movies shot as a video snapshot will have an <▣ SET> icon on the screen's upper left.

📝 ● Music recorded on the memory card must be used only for private enjoyment. Do not violate the rights of the copyright holder.
● To play background music, you must first copy the background music from the EOS DIGITAL Solution Disk (provided) to the card. For the copying procedure, see the Software Instruction Manual in the CD-ROM.
**Provided Software Usable with Albums**
  • **EOS Utility:** By copying background music to the card, you can play background music together with the playback of albums, normal movies, and slide shows on the camera.
  • **ZoomBrowser EX/ImageBrowser:** The edition of albums is possible.

156

MENU Menu Function Settings

The menu options displayed under the [❑'▯'], [❑'▯²], and [❑'▯³] tabs are explained below.

[❑'▯'] tab
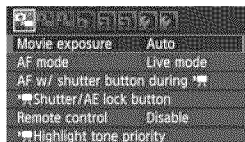
- **Movie exposure**
  Normally, set this to [**Auto**].
  Setting it to [**Manual**] enables you to manually set the ISO speed, shutter speed, and aperture for movie shooting (p.144).

- **AF mode**
  The AF modes will be the same as described on pages 131-137.
  You can select [**Live mode**], [⚙ **Live mode**], or [**Quick mode**]. Note that continuous focusing of a moving subject is not possible.

- **AF with shutter button during '▯ (movie recording)**
  When [**Enable**] is set, AF is possible during movie shooting.
  However, continuous autofocusing is not possible. If you autofocus during movie shooting, you might momentarily throw the focus way off or change the exposure. The movie will also record the lens operation noise.
  If the AF mode is set to [**Quick mode**], AF will be executed in [**Live mode**].

- **The settings under the [❑'▯'/❑'▯²/❑'▯³] menu tabs will take effect only in the <'▯> mode. They will not be applied in shooting modes other than the <'▯> mode.**
- The AF mode setting will also be applied to Live View shooting.

157

● **'🎥 Shutter/AE lock button**
You can change the function assigned to the shutter button's halfway position and to the AE lock button.

• **AF/AE lock:**
Normal function. Press the shutter button halfway to execute AF. Press the <✳> button for AE lock.

• **AE lock/AF:**
Press the shutter button halfway for AE lock. For AF, press the <✳> button. Convenient when you want to focus and meter at different parts of the picture.

• **AF/AF lock, no AE lock:**
Press the shutter button halfway to execute AF. While holding down the <✳> button, press the shutter button to take a still photo without executing AF. Convenient when you do not want to autofocus when taking a still photo during movie shooting. AE lock is not possible.

• **AE/AF, no AE lock:**
Press the shutter button halfway for metering. For AF, press the <✳> button. AE lock is not possible.

158

● **Remote control**
You can use the Remote Controller RC-6 (sold separately, p.261) to start and stop the movie shooting. Set the release mode switch to <2>, then press the transmit button. If the switch is set to <●> (immediate shooting), still photo shooting will take effect.

● **'🎥Highlight tone priority**
If [**Enable**] is set, highlight detail will be improved. The dynamic range is expanded from the standard 18% gray to bright highlights. The gradation between the grays and highlights becomes smoother. The settable ISO speed range will be ISO 200-6400. The Auto Lighting Optimizer will also be set automatically to [**Disable**] and cannot be changed.

[⌂▪] tab

Movie rec. size   1920x1080
Sound recording   Auto
Metering timer   16 sec.
Grid display   Off
Video snapshot   Disable

● Sound recording

Sound recording

Sound rec.   Auto

Wind filter   Disable

-dB 40   12   0
L
R

                       MENU
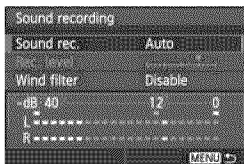
Level meter

Normally, the built-in microphone will record monaural sound. Stereo sound recording is possible by connecting an external microphone equipped with a stereo mini plug (3.5mm dia.) to the camera's external microphone IN terminal (p.18). When an external microphone is connected, sound recording will switch automatically to the external microphone.

[Sound rec.] options

[Auto] : The sound recording level will be adjusted automatically. Auto level control will operate automatically in response to the sound level.

[Manual] : For advanced users. You can adjust the sound recording level to one of 64 levels. Select [Rec. level] and look at the level meter while pressing the < ◄► > key to adjust the sound recording level. While looking at the peak hold indicator (approx. 3 sec.), adjust so that the level meter sometimes lights up the "12" (-12 dB) mark on the right for the loudest sounds. If it exceeds "0," the sound will be distorted.

[Disable] : Sound will not be recorded.

[Wind filter]
When **[Enable]** is set, outdoor wind noise entering the microphone
will be reduced. Note that some low-tone noise might also be
reduced. When shooting in places where there is no wind, set this to
[Disable] for a more natural sound recording.

- The sound volume balance between L (left) and R (right) cannot be
  adjusted.
- The 48 kHz sampling frequency will be 16-bit recordings for both L and
  R.

- **Metering timer**
  You can change how long the exposure setting is displayed (AE lock
  time).
- **Grid display**
  With **[Grid 1 ≢]** or **[Grid 2 ⧻]**, you can display grid lines. It can
  help you level the camera vertically or horizontally.
- **Video snapshot**
  For video snapshots, you can set the shooting duration for a single
  video snapshot to approx. 2 sec., 4 sec., or 8 sec. For details, see
  page 153.

The Metering timer and Grid display settings will also be reflected in Live
View shooting.

[📷🎬] tab
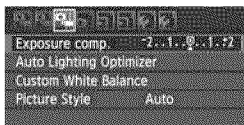
● **Exposure compensation**

Although exposure compensation can be set up to ±5 stops, exposure compensation for movies is restricted only up to ±3 stops. For still photos, exposure compensation may extend up to ±5 stops.

● **Auto Lighting Optimizer**

The Auto Lighting Optimizer can be set as explained on page 109. It will be applied to both movie shooting and still photos taken during movie shooting.

Under the [📷🎬] tab, if ['🎬**Highlight tone priority**] is set to [**Enable**], the Auto Lighting Optimizer will be set automatically to [**Disable**] and cannot be changed.

● **Custom White Balance**

As explained on page 117, the image for custom white balance can be selected.

● **Picture Style**

The Picture Style can be set as explained on page 81. It will be applied to both movie shooting and still photos taken during movie shooting.

⚠ White <🌡> and Red <🌡> Internal Temperature Warning Icons

● If the camera's internal temperature increases due to prolonged movie shooting or a high ambient temperature, a white <🌡> icon will appear. Even if you shoot a movie while this icon is displayed, the movie's image quality will not be affected. However, if you shoot still photos, the image quality of the still photos may deteriorate. You should stop shooting still photos and allow the camera to cool down.

● If the camera's internal temperature further increases while the white <🌡> icon is displayed, a red <🌡> icon may start blinking. This blinking icon is a warning that movie shooting will soon be terminated automatically. If this happens, you will not be able to shoot again until the camera's internal temperature decreases. Turn off the power and let the camera rest for a while.

● Movie shooting at a high temperature for a prolonged period will cause the <🌡> and <🌡> icons to appear sooner. When not shooting, turn off the camera.

⚠ Movie Shooting Cautions

Recording and Image Quality

● If the attached lens has an Image Stabilizer, the Image Stabilizer will operate at all times even if you do not press the shutter button halfway. The Image Stabilizer will thereby consume battery power and may shorten the total movie shooting time or decrease the number of possible shots. If you use a tripod or if the Image Stabilizer is not necessary, you should set the IS switch to <OFF>.

● The camera's built-in microphone will also record camera operation noise. Using a commercially-available external microphone can prevent (or reduce) these noises from being recorded.

● Do not connect anything other than an external microphone to the camera's external microphone IN terminal.

● If movie shooting is not possible due to insufficient remaining capacity of the card, the movie recording size and movie shooting remaining time (p.146) will be displayed in red.

⚠ Movie Shooting Cautions

Recording and Image Quality

● If you use a card having a slow writing speed, a five-level indicator might appear on the right of the screen during movie shooting. It indicates how much data has not yet been written to the card (remaining capacity of the internal buffer memory). The slower the card, the faster the indicator will climb upward. If the indicator becomes full, movie shooting will stop automatically.

Indicator

If the card has a fast writing speed, the indicator will either not appear or the level (if displayed) will hardly go upward. First, shoot a few test movies to see if the card can write fast enough. If you take still photos during movie shooting, the movie shooting might stop. Setting a low image-recording quality for still images might resolve this problem.

Playback and TV connection

● If the brightness changes during autoexposure movie shooting, that part might look momentarily still when you playback the movie. In such cases, shoot movies with manual exposure.

● If you connect the camera to a TV set with an HDMI cable (p.218) and shoot a movie in [**1920x1080**] or [**1280x720**], the movie being shot will be displayed at a small size on the TV. However, the actual movie will be properly recorded at the movie recording size that was set.

● If you connect the camera to a TV set (p.218, 221) and shoot a movie, the TV will not output any sound during the shooting. However, the sound will be properly recorded.

Handy Features

Handy Features

MENU Silencing the Beeper

You can prevent the beeper from sounding when focus is achieved or during self-timer operation.

Under the [□'] tab, select [**Beep**], then press <⊕>. Select [**Disable**], then press <⊕>.

MENU Card Reminder

This prevents shooting if there is no card in the camera.
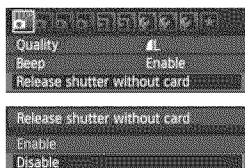
Under the [□'] tab, select [**Release shutter without card**], then press <⊕>. Select [**Disable**], then press <⊕>.

If there is no card installed and you press the shutter button, "**Card**" will be displayed in the viewfinder, and you cannot release the shutter.

MENU Setting the Image Review Time

You can set how long the image is displayed on the LCD monitor immediately after capture. If [**Off**] is set, the image will not be displayed immediately after image capture. If [**Hold**] is set, the image review will be displayed up until the [**Auto power off**] time.

During image review, if you operate any camera controls such as pressing the shutter button halfway, the image review will end.

Under the [□'] tab, select [**Image review**], then press <⊕>. Select the desired setting, then press <⊕>.

166

MENU Setting the Auto Power-off Time

To save battery power, the camera turns off automatically after the set time of idle operation elapses. You can set this auto power-off time. When the camera has turned off due to auto power off, you can wake it up by pressing the shutter button halfway or pressing any of the following buttons: <MENU>, <DISP.>, <⊡>, <◻> etc.

If [Off] has been set, either turn off the camera yourself or press the <DISP.> button to turn off the LCD monitor to save battery power.

Even if [Off] has been set and the camera is not used for 30 min., the LCD monitor will turn off automatically. To turn on the LCD monitor again, press the <DISP.> button.

Under the [♥'] tab, select [**Auto power off**], then press <⊛>. Select the desired setting, then press <⊛>.

MENU Adjusting the LCD Monitor Brightness

You can adjust the brightness of the LCD monitor to make it easier to read.

Under the [♥'] tab, select [**LCD brightness**], then press <⊛>. With the adjustment screen displayed, press the <◄►> key to adjust the brightness, then press <⊛>.
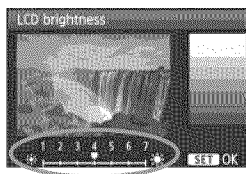
When checking the exposure of an image, set the LCD monitor brightness to 4 and prevent the ambient light from affecting the reviewed image.

167

MENU Creating and Selecting a Folder

You can freely create and select the folder where the captured images are to be saved.

This is optional since a folder will be created automatically for saving captured images.

Create a Folder
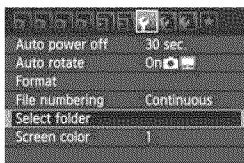
Select [Select folder].

● Under the [♥] tab, select [**Select folder**], then press <SET>.

Select [Create folder].

● Select [**Create folder**], then press <SET>.

Create a new folder.

● Select [**OK**], then press <SET>.
▶ A new folder with a higher one-up folder number is created.

Selecting a Folder

Lowest file number

Number of images
in folder

Folder name

Highest file number
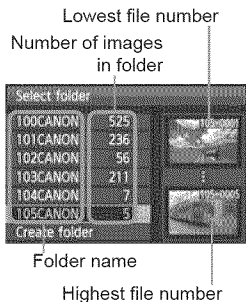
⊚ With the folder selection screen
displayed, select a folder and press
< (SET) >.

▶ The folder where the captured
images will be saved is selected.

⊚ Subsequent captured images will be
recorded into the selected folder.

About Folders

As with "**100CANON**" for example, the folder name starts with three digits
(folder number) followed by five alphanumeric characters. A folder can contain
up to 9999 images (file No. 0001 - 9999). When a folder becomes full, a new
folder with a higher one-up folder number is created automatically. Also, if
manual reset (p.171) is executed, a new folder will be created automatically.
Folders numbered from 100 to 999 can be created.

Creating Folders with a Personal Computer

With the card open on the screen, create a new folder named "**DCIM**". Open
the DCIM folder and create as many folders as necessary to save and
organize your images. The folder name must follow the "**100ABC_D**" format
where the first three digits is 100 - 999 followed by five alphanumeric
characters. The five characters can be a combination of upper- or lower-case
letters from A to Z, numerals, and an underscore "_". There can be no space in
the folder name. Also, folder names cannot have the same three-digit number
such as "100ABC_D" and "100W_XYZ" even if the letters are different.

169

MENU File Numbering Methods

The image files will be numbered from 0001 to 9999 in the order the images are taken, then saved in a folder. You can change how the file number is assigned.
The file number will appear on your computer in this format: **IMG_0001.JPG**.
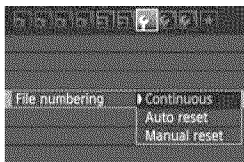
Under the [♥] tab, select [**File numbering**], then press <SET>. The available settings are described below. Select one, then press <SET>.

● [**Continuous**]: **The file numbering continues in sequence even after you replace the card or create a folder.**
Even after you replace the card or create a new folder, the file numbering continues in sequence up to 9999. This is convenient when you want to save images numbered anywhere between 0001 to 9999 in multiple cards or folders into one folder in your personal computer.
If the replacement card or existing folder already contains images recorded previously, the file numbering of the new images might continue from the file numbering of the existing images in the card or folder. If you want to use continuous file numbering, you should use a newly-formatted card each time.

File numbering after replacing the card

Card-1 → Card-2

XXX-0051 → XXX-0052
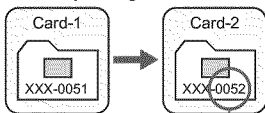
Next sequential file number

File numbering after creating a folder

Card-1

100 → 101
XXX-0051 → XXX-0052

170
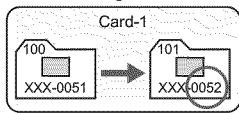
● **[Auto reset]: The file numbering is reset to 0001 whenever you replace the card or create a folder.**
Whenever the card is replaced or a new folder created, the file numbering starts from 0001. This is convenient if you want to organize images according to cards or folders.
If the replacement card or existing folder already contains images recorded previously, the file numbering of the new images might continue from the file numbering of the existing images in the card or folder. If you want to save images with the file numbering starting from 0001, use a newly formatted card each time.

File numbering after replacing the card

Card-1 → Card-2
XXX-0051   100-0001

File numbering is reset

File numbering after creating a folder

Card-1
100 → 101
XXX-0051 → XXX-0001
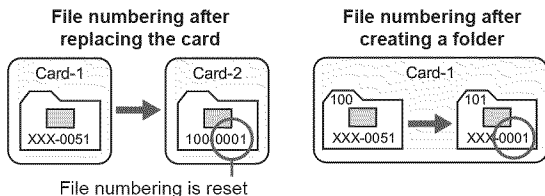
● **[Manual reset]: To reset the file numbering to 0001 manually or to start from file number 0001 in a new folder.**
When you reset the file numbering manually, a new folder is created automatically and the file numbering of images saved to that folder starts from 0001.
This is convenient if you want to use different folders for the images taken yesterday and the ones taken today, for example.
After the manual reset, the file numbering returns to continuous or auto reset. (There will be no Manual reset confirmation screen.)

If the file number in folder No. 999 reaches 9999, shooting will not be possible even if the card still has storage capacity. The LCD monitor will display a message telling you to replace the card. Replace it with a new card.

For both JPEG and RAW images, the file name will start with "IMG_". Movie file names will start with "MVI_". The extension will be ".JPG" for JPEG images, ".CR2" for RAW images, and ". MOV" for movies.

171

MENU Setting Copyright Information ☆

When you set the copyright information, it will be appended to the image as Exif information.

Select [Copyright information].

● Under the [♥:] tab, select [**Copyright information**], then press <⊛>.
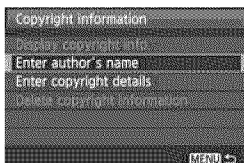
Select the option to be set.

● Select [**Enter author's name**] or [**Enter copyright details**], then press <⊛>.

▶ The text entry screen will appear.

● Select [**Display copyright info.**] to check the copyright information currently set.

● Select [**Delete copyright information**] to delete the copyright information currently set.

Enter text.

● Refer to "Text Entry Procedure" on the next page and enter the copyright information.

● Enter up to 63 alphanumeric characters and symbols.

Exit the setting.

● After entering the text, press the <MENU> button to exit.

172

Text Entry Procedure

● **Changing the entry area:**
Press the <Q> button to toggle between the top and bottom entry areas.

● **Moving the cursor:**
Press the <◄►> key to move the cursor.

● **Entering text:**
In the bottom area, press the <✥> key or turn the <⌂> dial to select a character, then press <⑤> to enter it.

● **Deleting a character:**
Press the <🗑> button to delete one character.

● **Exiting:**
After entering the text, press the <MENU> button to finalize the text entry and return to the screen in step 2.

● **Canceling the text entry:**
To cancel the text entry, press the <INFO.> button and the screen in step 2 will reappear.

📝 You can also set or check the copyright information with EOS Utility (provided software, p.302).

MENU Auto Rotation of Vertical Images

Vertical images are rotated automatically so they are displayed vertically on the camera's LCD monitor and on the personal computer instead of horizontally. The setting of this feature can be changed.

Under the [♥˙] tab, select [**Auto rotate**], then press <⊛>. The available settings are described below. Select one, then press <⊛>.

● [**On ▢ 💻**] : The vertical image is automatically rotated during playback on both the camera's LCD monitor and on the computer.

● [**On 💻**] : The vertical image is automatically rotated only on the computer.

● [**Off**] : The vertical image is not automatically rotated.

? FAQ

● **The vertical image is not rotated during the image review immediately after it is captured.**
Press the <▶> button and the image playback will display the rotated image.

● [**On ▢ 💻**] **is set, but the image does not rotate during playback.**
Auto rotate will not work with vertical images captured while [**Auto rotate**] was set to [**Off**]. If the vertical image is taken while the camera is pointed up or down, the image might not be rotated automatically for playback. In such a case, see "Rotating the Image" on page 205.

● **On the camera's LCD monitor, I want to rotate an image captured when** [**On 💻**] **had been set.**
Set [**On ▢ 💻**], then playback the image. It will be rotated.

● **The vertical image does not rotate on the computer screen.**
The software used is not compatible with image rotation. Use the software provided with the camera instead.

INFO. Checking Camera Settings

While the shooting settings (p.47) are displayed, press the <INFO.> button to display the camera's major function settings.
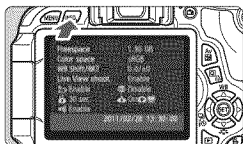
Settings display

Freespace	1.90 GB	—— Card remaining capacity
Color space	sRGB	—— Color space (p.121)
WB Shift/BKT	0.0/±0	—— WB correction (p.119)/ WB bracketing (p.120)
Live View shoot.	Enable	—— Live View shooting (p.123)
Enable	Disable	—— Red-eye reduction (p.91)
30 sec.	On	—— Auto rotate display (p.174)
Enable		
	2011/02/28 13:30:00	

Date/Time (p.34)

Beeper (p.166)

Auto power off (p.167)

Sensor cleaning (p.184)

175

MENU Reverting the Camera to the Default Settings ☆

The camera's shooting settings and menu settings can be reverted to the default. This option is available in Creative Zone modes.

Select [Clear settings].

● Under the [♥⁺] tab, select [Clear settings], then press <⊛>.
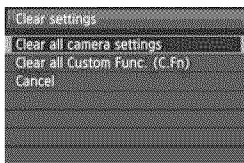
Select [Clear all camera settings].

● Select [Clear all camera settings], then press <⊛>.

Select [OK].

● Select [OK], then press <⊛>.
▶ Setting [Clear all camera settings] will reset the camera to the default settings on the next page.

? FAQ

● **Clearing all camera settings:**
After the procedure above, select [Clear all Custom Func. (C.Fn)] in [♥⁺ Clear settings] to clear all the Custom Function settings (p.250).

176

Shooting Settings

AF mode	One-Shot AF
AF point selection	Automatic selection
Drive mode	□ (Single shooting)
Metering mode	⊛ (Evaluative metering)
ISO speed	AUTO (Auto)
ISO Auto	Max.: 3200
Exposure compensation/AEB	Canceled
Built-in flash func. setting	NormalFiring
Flash exposure compensation	0 (Zero)
Custom Functions	Unchanged

Image-recording Settings

Quality	▲L
Picture Style	Auto
Auto Lighting Optimizer	Standard
Peripheral illumination correction	Enable/ Correction data retained
Color space	sRGB
White balance	AWB (Auto)
Custom white balance	Canceled
WB correction	Canceled
WB-BKT	Canceled
File numbering	Continuous
Auto cleaning	Enable
Dust Delete Data	Erased

Camera Settings

Auto power off	30 sec.
Beep	Enable
Release shutter without card	Enable
Image review	2 sec.
Histogram	Brightness
Image jump w/☆	⌀ (10 images)
Auto rotate	On ⬛ 💻
LCD brightness	☀ ⊢⊢⊢┿⊢⊢⊣ ☀
LCD off/on button	Shutter button
Date/Time	Unchanged
Language	Unchanged
Video system	Unchanged
Feature guide	Enable
Copyright information	Unchanged
Bass boost	Disable
Control over HDMI	Disable
Eye-Fi transmission	Disable
My Menu settings	Unchanged

177

Live View Shooting Settings

Live View shooting	Enable
AF mode	Live mode
Grid display	Off
Aspect ratio	3:2
Metering timer	16 sec.

Movie Shooting Settings

Movie exposure	Auto
AF mode	Live mode
AF w/ shutter button during 🎬	Disable
🎬 Shutter/AE lock button	AF/AE lock
Remote control	Disable
🎬 Highlight tone priority	Disable
Movie recording size	1920x1080
Sound recording	Auto
Metering timer	16 sec.
Grid display	Off
Video snapshot	Disable
Exposure compensation	Canceled
Auto Lighting Optimizer	Standard
Custom white balance	Canceled
Picture Style	Auto

MENU Turning the LCD Monitor Off/On

The shooting settings display (p.47) can be turned on or off by pressing the shutter button halfway.

Under the [♥'] tab, select [**LCD off/on btn**], then press <⊕>. The available settings are described below. Select one, then press <⊕>.

● **[Shutter btn.]** : When you press the shutter button halfway, the display will turn off. And when you let go of the shutter button, the display will turn on.

● **[Shutter/DISP]**: When you press the shutter button halfway, the display will turn off. And when you let go of the shutter button, the display will remain off. To turn on the display, press the <DISP.> button.

● **[Remains on]** : Display remains on even when you press the shutter button halfway. To turn off display, press the <DISP.> button.

MENU Changing the Shooting Settings Screen Color

You can change the background color of the shooting settings screen.
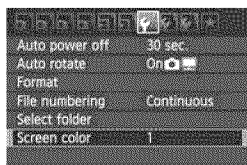
Under the [♥'] tab, select [**Screen color**], then press <⊕>. Select the desired color, then press <⊕>.

When you exit the menu, the selected color will be displayed for the shooting settings screen.

179
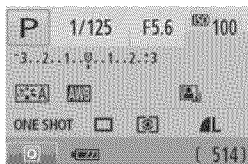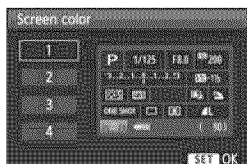
MENU Setting the Flash ☆

The built-in flash and external Speedlite settings can be set with the camera's menu. You can use the camera's menu to set the external Speedlite function settings only if the attached **EX-series Speedlite is compatible with this function.**
The setting procedure is the same as setting a camera menu function.
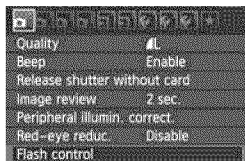
Select [Flash control].

- Under the [🖿'] tab, select [**Flash control**], then press <⊛>.
- ▶ The flash control screen will appear.

[Flash firing]
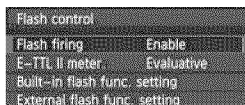
- Normally, set this to [**Enable**].
- If [Disable] is set, neither the built-in flash nor the external Speedlite will fire. This is useful when you only want to use the flash's AF-assist beam.

E-TTL II Metering Modes
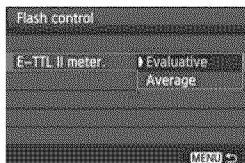
- For normal flash exposures, set this to [**Evaluative**].
- [**Average**] is for advanced users. As with an external Speedlite, the metering area is averaged. Flash exposure compensation may be necessary.

Even if [**Flash firing**] has been set to [**Disable**], if focus is difficult to achieve in low light, the built-in flash may still fire a series of flashes (AF-assist beam, p.86).

180

[Built-in flash func. setting] and [External flash func. setting]

With [**Built-in flash func. setting**] and [**External flash func. setting**], you can set the functions listed in the table below. The functions displayed under [**External flash func. setting**] will vary depending on the Speedlite model.
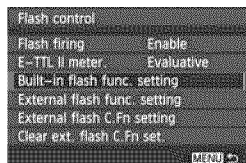
● Select [**Built-in flash func. setting**] or [**External flash func. setting**].
▶ The flash functions will be displayed. The functions not dimmed can be selected and set.

[Built-in flash func. setting] and [External flash func. setting] Settable Functions

Function	[Built-in flash func. setting]			[External flash func. setting]	Page
	Normal Firing	Easy Wireless (p.191)	Custom Wireless (p.194)		
Flash mode			O	O	182
Shutter sync.	O			O	182
FEB*				O	
Wireless flash			O	O	189
Channel		O	O	O	191
Flash group			O	O	195
Flash exposure compensation	O	O	O	O	104
Zoom*				O	

* For [**FEB**] (Flash exposure bracketing) and [**Zoom**], refer to the Speedlite's instruction manual.

● **Shutter sync.**

Normally, set this to [**1st curtain**] so that the flash fires immediately after the exposure starts.

If [**2nd curtain**] is set, the flash will fire right before the exposure ends. When this is combined with a slow sync speed, you can create a trail of light such as from car headlights at night. With 2nd-curtain sync, a preflash is fired when you press the shutter button completely. This is to determine the exposure. Then immediately before the exposure ends, the real flash is fired. Therefore, two flashes will be fired. However, with shutter speeds faster than 1/30 sec., 1st curtain sync will automatically take effect.

If an external Speedlite is attached, you can also set [**Hi-speed**] (✦H). For details, see the Speedlite's instruction manual.

● **Wireless flash**

See "Wireless Flash Photography" on page 189.

● **Flash exposure compensation**

See "⚡ Flash Exposure Compensation" on page 104.

● **Flash mode**

You can select the flash mode to suit your desired flash shooting.
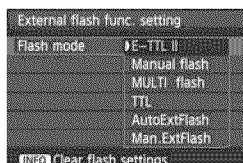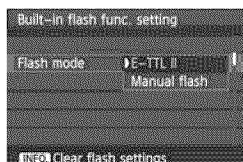
● [**E-TTL II**] is the standard mode of EX-series Speedlites for automatic flash shooting.

● [**Manual flash**] is for advanced users who want to set the [**Flash output**] (1/1 to 1/128) themselves.

● Regarding other flash modes, refer to your Speedlite's instruction manual.

● **Clear flash settings**
With the [**Built-in flash func. setting**] or [**External flash func. setting**] screen displayed, press the <INFO.> button to display the screen to clear the flash settings. **When you select [OK], the settings for the flash will be cleared.**

Setting the External Speedlite Custom Functions

The Custom Functions displayed under [**External flash C.Fn setting**] will vary depending on the Speedlite model.
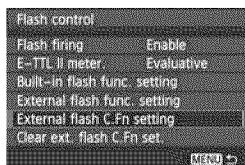
Display the Custom Function.

● With the camera ready to shoot with an external Speedlite, select [**External flash C.Fn setting**], then press <⊛>.
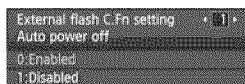
Set the Custom Function.

● Press the <◀▶> key to select the function number, then set the function. The procedure is the same as setting the camera's Custom Functions (p.250).
● To clear all the Custom Function settings, select [**Clear ext. flash C.Fn set.**] in step 1.

183

⊡ Automatic Sensor Cleaning

Whenever you set the power switch to <ON> or <OFF>, the Self Cleaning Sensor Unit operates to automatically shake off the dust on the front of the sensor. Normally, you need not pay attention to this operation. However, you can execute the sensor cleaning at anytime as well as disable it.

Cleaning the Sensor Now
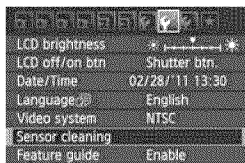
Select [Sensor cleaning].

● Under the [♥'] tab, select [**Sensor cleaning**], then press <⑤>.
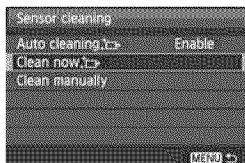
Select [Clean now ⊡].

● Select [**Clean now ⊡**], then press <⑤>.

● Select [**OK**] on the dialog screen, then press <⑤>.

▶ The screen will indicate that the sensor is being cleaned. Although there will be a shutter sound, a picture is not taken.

📷 ● For best results, do the sensor cleaning while the camera bottom is placed on a table or other flat surface.

● Even if you repeat the sensor cleaning, the result will not improve that much. Right after the sensor cleaning is finished, the [**Clean now ⊡**] option will remain disabled temporarily.

Disabling Automatic Sensor Cleaning

● In step 2, select [**Auto cleaning ⊡**] and set it to [**Disable**].

▶ The sensor cleaning will no longer be executed when you set the power switch to <ON> or <OFF>.

[MENU] Appending Dust Delete Data ☆

Normally, the Self Cleaning Sensor Unit will eliminate most of the dust that might be visible on captured images. However, in case visible dust still remains, you can append the Dust Delete Data to the image for erasing the dust spots later. The Dust Delete Data is used by Digital Photo Professional (provided software, p.302) to erase the dust spots automatically.
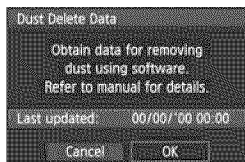
Preparation

- Get a solid-white object (paper, etc.).
- Set the lens focal length to 50mm or longer.
- Set the lens focus mode switch to <**MF**> and set the focus to infinity (∞). If the lens has no distance scale, look at the front of the lens and turn the focusing ring clockwise all the way.

Obtain the Dust Delete Data
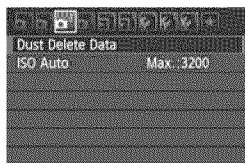
Select [Dust Delete Data].

- Under the [📷] tab, select [**Dust Delete Data**], then press <⊛>.

Select [OK].

- Select [**OK**] and press <⊛>. After the automatic self-cleaning of the sensor is performed, a message will appear. Although there will be a shutter sound, a picture is not taken.
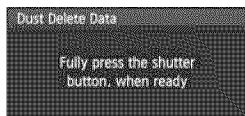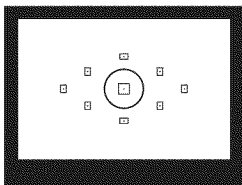
Photograph a solid-white object.

- At a distance of 20 cm - 30 cm (0.7 ft. - 1.0 ft.), fill the viewfinder with a patternless, solid-white object and take a picture.
- ▶ The picture will be taken in aperture-priority AE mode at an aperture of f/22.
- Since the image will not be saved, the data can still be obtained even if there is no card in the camera.
- ▶ When the picture is taken, the camera will start collecting the Dust Delete Data. When the Dust Delete Data is obtained, a message will appear. Select [OK], and the menu will reappear.
- If the data was not obtained successfully, a message to that effect will appear. Follow the "Preparation" procedure on the preceding page, then select [OK]. Take the picture again.

About the Dust Delete Data

After the Dust Delete Data is obtained, it is appended to all the JPEG and RAW images captured thereafter. Before an important shoot, you should update the Dust Delete Data by obtaining it again.
For details about using Digital Photo Professional (provided software, p.302) to erase dust spots, see the Software Instruction Manual (p.304) in the Software Instruction Manual CD-ROM.
The Dust Delete Data appended to the image is so small that it hardly affects the image file size.

🔴 Be sure to use a solid-white object such as a new sheet of white paper. If the paper has any pattern or design, it may be recognized as dust data and affect the accuracy of the dust deletion with the software.

[MENU] Manual Sensor Cleaning ☆

Dust which could not be removed by the automatic sensor cleaning can be removed manually with a blower, etc.
The surface of the image sensor is extremely delicate. If the sensor needs to be cleaned directly, having it done by a Canon Service Center is recommended.
Before cleaning the sensor, detach the lens from the camera.
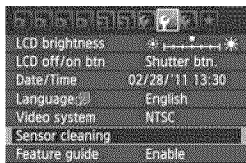
LCD brightness	
LCD off/on btn	Shutter btn.
Date/Time	02/28/'11 13:30
Language	English
Video system	NTSC
Sensor cleaning	
Feature guide	Enable

Select [Sensor cleaning].

● Under the [♀] tab, select [**Sensor cleaning**], then press <(SET)>.

Sensor cleaning	
Auto cleaning	Enable
Clean now	
Clean manually	
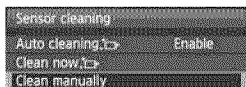
Select [Clean manually].

● Select [**Clean manually**], then press <(SET)>.

Clean manually
Mirror will go up.
Clean the sensor.
Cancel   OK

Select [OK].

● Select [**OK**], then press <(SET)>.
▶ In a moment, the reflex mirror will lockup and the shutter will open.

Clean the sensor.

End the cleaning.

● Set the power switch to <OFF>.

● For the power source, using AC Adapter Kit ACK-E8 (sold separately) is recommended.
● If you use a battery, make sure it is fully recharged. If the battery grip with size-AA/LR6 batteries is attached, manual sensor cleaning will not be possible.

187

While cleaning the sensor, never do any of the following. If the power is cut off, the shutter will close and the shutter curtains and image sensor might get damaged.
- **Setting the power switch to <OFF>.**
- **Opening the battery compartment cover.**
- **Opening the card slot cover.**

- The surface of the image sensor is extremely delicate. Clean the sensor with care.
- Use a plain blower without any brush attached. A brush can scratch the sensor.
- Do not insert the blower tip inside the camera beyond the lens mount. If the power is turned off, the shutter will close and the shutter curtains or reflex mirror might get damaged.
- Never use canned air or gas to clean the sensor. The blowing force can damage the sensor or the spray gas can freeze on the sensor.
- If the battery level becomes low while you clean the sensor, the beeper will sound as a warning. Stop cleaning the sensor.
- If a smudge that cannot be removed with a blower remains, having the sensor cleaned by a Canon Service Center is recommended.

8

Wireless Flash Photography
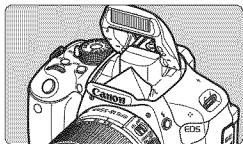
You can use the built-in flash for wireless flash shooting.

The camera's built-in flash can work as a master unit with Canon Speedlites having a wireless slave feature and wirelessly trigger the Speedlite(s) to fire.

Canceling the slave unit's auto power off

To cancel the slave unit's auto power off, press the camera's <✱> button. If you are using manual flash firing, press the slave unit's test firing (PILOT) button to cancel the auto power off.

Be sure to also read the explanations about wireless flash photography in the Speedlite's instruction manual.

Using Wireless Flash ☆

Slave Unit Settings and Position

Regarding your Speedlite (slave unit), refer to its instruction manual and set it as follows. The settings other than the below for the slave unit's control are all set with the camera. Different types of Canon Speedlite slave units can be used and controlled together.

(1) Set the Speedlite as a slave unit.

(2) Set the Speedlite's transmission channel to the same one as the camera's.[*1]

(3) If you want to set the flash ratio (p.196), set the slave unit ID.

(4) Position the camera and slave unit(s) within the range shown below.

(5) Face the slave unit's wireless sensor toward the camera.[*2]

Wireless flash set-up example

Indoors

Outdoors

Approx. 10m (32.8ft.)

Approx. 7m (23.0ft.)

Approx. 80°

Approx. 5m (16.4ft.)   Approx. 7m (23.0ft.)
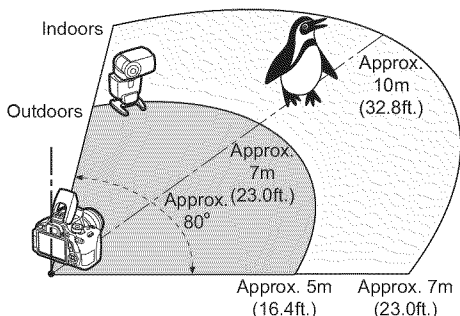
*1: If the Speedlite does not have a transmission channel setting function, the camera can work with any channel.

*2: In small rooms, the slave unit may work even if its wireless sensor does not face the camera. The camera's wireless signals can bounce off the walls and be received by the slave unit. With EX-series Speedlite having a fixed flash head and wireless sensor, make sure it fires, then take the picture.

Easy Wireless Flash Shooting

An easy, basic, and fully-automatic wireless flash shooting is explained below.

Fully Automatic Shooting with One External Speedlite
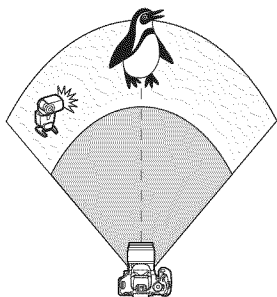
Steps 1 to 4 and 6 apply to all wireless flash shooting. Therefore, these steps are omitted in the other wireless flash setups explained on the pages hereafter.
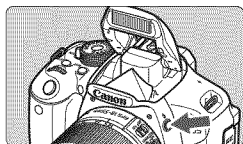
Press the <⚡> button to raise the built-in flash.

● For wireless flash shooting, be sure to raise the built-in flash.
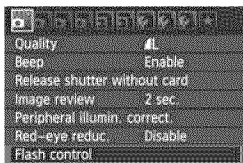
Select [Flash control].

● Under the [🗂] tab, select [**Flash control**], then press <⊛>.
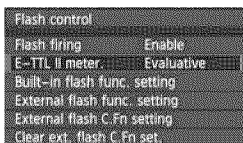
Select [Evaluative].

● For [**E-TTL II meter.**], select [**Evaluative**], then press <⊛>.

191

Flash control

Flash firing	Enable
E-TTL II meter.	Evaluative
Built-in flash func. setting	
External flash func. setting	
External flash C.Fn setting	
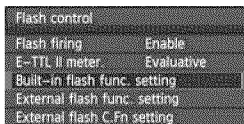
Select [Built-in flash func. setting].

- Select [**Built-in flash func. setting**], then press <⊛>.

Built-in flash func. setting

Built-in flash	EasyWireless
Flash mode	E-TTL II
Shutter sync.	1st curtain
Wireless func.	⚡
Channel	1 ch
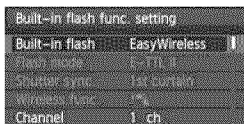
Select [EasyWireless].

- For [**Built-in flash**], select [**EasyWireless**], then press <⊛>.

Built-in flash func. setting

Built-in flash	EasyWireless
Flash mode	E-TTL II
Shutter sync.	1st curtain
Wireless func.	⚡
Channel	1 ch
Firing group	⚡ All
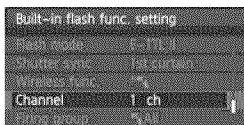
Set [Channel].

- Set the channel (1-4) to the same one as the slave unit.

Take the picture.

- As with normal flash shooting, you can set the camera and take the picture in the same way.

Built-in flash func. setting

Built-in flash	NormalFiring
Flash mode	E-TTL II
Shutter sync.	1st curtain
⚡exp. comp.	-2..1..0..1.:2

INFO Clear flash settings
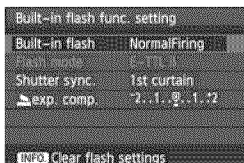
Exit the wireless flash shooting.

- For [**Built-in flash func. setting**], select [**NormalFiring**].

- Setting [**E-TTL II meter.**] to [**Evaluative**] is recommended.
- With [**EasyWireless**], even if you disable the built-in flash from firing, it will still fire to control the slave unit. Depending on shooting conditions, the flash fired to control the slave unit may appear in the picture.
- Firing a test flash is not possible with the slave unit.

Fully-automatic Shooting with Multiple External Speedlites

You can have multiple slave units fire as if they were a single Speedlite.
Convenient when you need a large flash output.
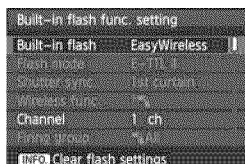
Basic settings:

Flash mode   : E-TTL II
E-TTL II meter. : Evaluative
Built-in flash : EasyWireless
Channel   : (Same as slave units)
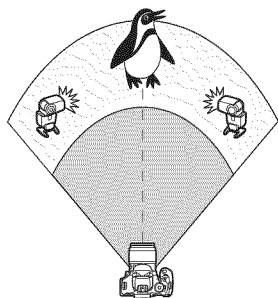
All the slave units will fire at the same
output and be controlled to obtain a
standard exposure.
No matter what the slave ID is (A, B, or
C), all the slave units will fire as one
group.

Flash Exposure Compensation

If the flash exposure looks too dark or too bright, you can set flash
exposure compensation to adjust the slave units' flash output.
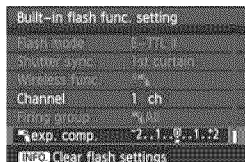
- Select [**Flash exposure
  compensation**], then press < (SET) >.
- If the flash exposure is too dark,
  press the < ► > key to increase the
  flash exposure and make it brighter. If
  the flash exposure is too bright, press
  the < ◄ > key to decrease the flash
  exposure and make it darker.

193

Custom Wireless Flash Shooting

Fully-automatic Shooting with One External Speedlite and Built-in Flash
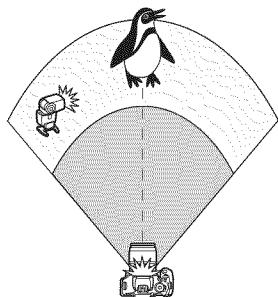
This describes fully-automatic wireless flash shooting with one external Speedlite and the built-in flash.
You can change the flash ratio between the external Speedlite and built-in flash to adjust how the shadows look on the subject.
On the menu screens, the < ᵉ❚ > and < ❚ > icons refer to the external Speedlite, and the < ᵉ➘ > and < ➘ > icons refer to the built-in flash.

Select [CustWireless].

● Follow step 5 on page 192 to select [CustWireless], then press < (ET) >.

Select [Wireless func.].

● For [Wireless func.], select [ᵉ❚ : ᵉ➘], then press < (ET) >.

### Set the desired flash ratio and take the picture.

● Select [ᵉ❚ : ᵉ➘] and set the flash ratio within 8:1 to 1:1. Setting a flash ratio to the right of 1:1 (up to 1:8) is not possible.
● If the built-in flash output is not enough, set a higher ISO speed (p.79).

The 8:1 to 1:1 flash ratio is equivalent to 3:1 to 1:1 stops (1/2-stop increments).

194

Fully-automatic Shooting with Multiple External Speedlites

Multiple Speedlite slave units can be treated as one flash unit or separated into slave groups whose flash ratio can be set.
The basic settings are shown below. By changing the [**Firing group**] setting, you can shoot with various wireless flash setups with multiple Speedlites.
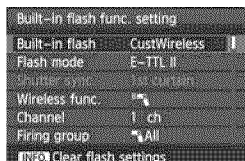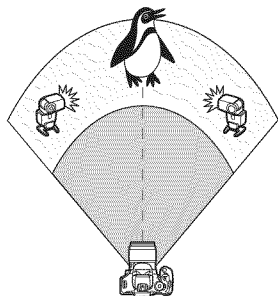
Basic settings:

Flash mode   : **E-TTL II**
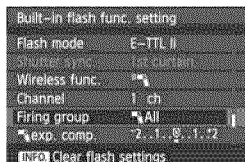**E-TTL II meter.** : **Evaluative**
Wireless func. : ᵉ⁻ᵍ
Channel   : (Same as slave units)

### [ᵍAll] Using multiple slave Speedlites as one flash unit

Convenient when you need a large flash output. All the slave Speedlites will fire at the same output and be controlled to obtain a standard exposure.
No matter what the slave ID is (A, B, or C), all the slave units will fire as one group.
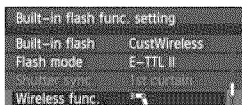
Set [Firing group] to [ᵍAll], then take the picture.

## [⚡ (A:B)] Multiple slave units in multiple groups
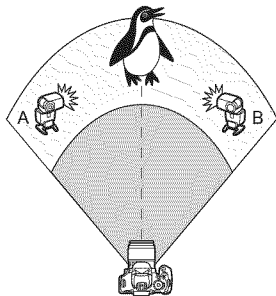
Divide the slave units into groups A and B, and change the flash ratio to obtain the desired lighting effect.
Refer to your Speedlite's instruction manual to set one slave unit's slave ID to A (Group A) and the other slave unit's ID to B (Group B) and position them as shown in the illustration.

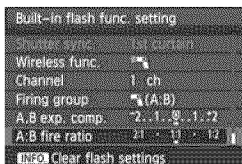### Select [Wireless func.].

● Follow step 2 on page 194 to select [⚡], then press <⊛>.
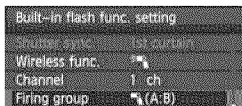
Set [Firing group] to [⚡ (A:B)].

Set the desired flash ratio and take the picture.

● Select [A:B fire ratio] and set the flash ratio.

⚠ If [Firing group] is set to [⚡ (A:B)], group C will not fire.

📋 The 8:1 to 1:1 to 1:8 flash ratio is equivalent to 3:1 to 1:1 to 1:3 stops (1/2-stop increments).

Fully-automatic Shooting with the Built-in Flash and Multiple External Speedlites

The built-in flash can also be added to wireless flash shooting explained on pages 195-196.
The basic settings are shown below. By changing the [**Firing group**] setting, you can shoot with various wireless flash setups of multiple Speedlites complemented with the built-in flash.

1 **Basic settings:**

Flash mode   : **E-TTL II**
E-TTL II meter. : Evaluative
Wireless func. : [³■᛫+³■᛫]
Channel   : (Same as slave units)

2 **Select [Firing group].**

● Select the firing group, then set the flash ratio, flash exposure compensation, and other necessary settings before shooting.

[■All and ■]

[■ (A:B) ■]

197
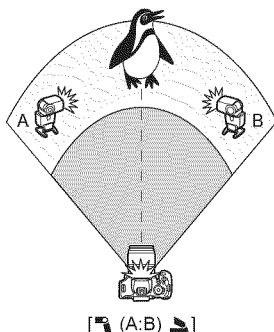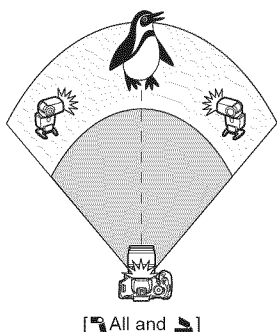
Other Settings

Flash Exposure Compensation

When [**Flash mode**] is set to [**E-TTL II**], flash exposure compensation can be set. The flash exposure compensation settings (see below) which can be set will differ depending on the [**Wireless func.**] and [**Firing group**] settings.
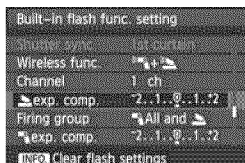
[Flash exp. comp]

● The flash exposure compensation is applied to the built-in flash and all external Speedlites.

[exp. comp.]

● The flash exposure compensation is applied to the built-in flash.

[exp. comp.]

● The flash exposure compensation is applied to all external Speedlites.

[A,B exp. comp.]

● The flash exposure compensation is applied to both groups A and B.

FE Lock

If [**Flash mode**] is set to [**E-TTL II**], you can press the <✱> button to perform FE lock.

Setting the Flash Output Manually for Wireless Flash

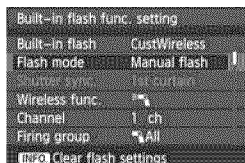When [**Flash mode**] is set to [**Manual flash**], the flash output can be set manually. The flash output settings ([■ **flash output**], [**Group A output**], etc.) that can be set will differ depending on the [**Wireless func.**] setting (see below).

Built-in flash func. setting	
Built-in flash	CustWireless
Flash mode	Manual flash
Shutter sync.	1st curtain
Wireless func.	■
Channel	1 ch
Firing group	■All
[INFO] Clear flash settings	

[Wireless func.: ＞■]

● [**Firing group: ■All**]: The manual flash output setting will be applied to all the external Speedlites.

● [**Firing group: ■ (A:B)**]: You can set the flash output separately for slave groups A and B.

[Wireless func.: ＞■ +＞▲]

● [**Firing group: ■All and ▲**]: The flash output can be set separately for the external Speedlite(s) and built-in flash.

● [**Firing group: ■ (A:B) ▲**]: You can set the flash output separately for slave groups A and B. You can also set the flash output for the built-in flash.

199

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This Instruction Manual booklet is current as of January 2011. For information on the camera's compatibility with any accessories and lenses introduced after this date, contact any Canon Service Center.